Filed: 5/17/2017 10:23:09 AM WEQC

From: Jennifer Mickle
To: Matthew Kunze
Cc: Deanna Hill
Subject: Re: looking for TFN 6 2/025 - RAMACO
Date: Tuesday, August 20, 2013 10:38:05 AM

Matt~

I have this marked as PRELIMINARY per Mark R. he said until further notice. So, all I have is the e-mail request for a TFN in the file. Not sure when we will get other info.

Thanks Jen

On Mon, Aug 19, 2013 at 10:32 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Ok, thanks!
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Mon, Aug 19, 2013 at 10:30 AM, Jennifer Mickle <jennifer.mickle@wyo.gov> wrote:
>
> > I have this file but have not received the package as of today. I have not gotten the mail this morning from Kim. So not sure if it will be in this morning or this afternoon. Will let you know when it comes in,
> >
> > Thanks Jen
> >
> > On Mon, Aug 19, 2013 at 10:25 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
> >
> > > Hi,
> > >
> > > I was wondering if anyone has a file out for this? It is a fairly new D3 TFN.
> > >
> > > Thanks, Matt
> > >
> > > ---
> > > Matt Kunze
> > > Surface Water Hydrologist, Division Services
> > > Wyoming Department of Environmental Quality, Land Quality Division
> > > 122 West 25th Street
> > > Herschler Building 3W
> > > Cheyenne, WY 82002
> > > 307-777-7055
> > >
> > > E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Brook 6b

--

Jennifer Bjerke-Mickle
Records Analyst
State of Wyoming
DEQ-Land Quality Division
Herschler Bldg., 3rd Flr. West
122 West 25th St.
Cheyenne, WY 82002
jennifer.mickle@wyo.gov
Phone: 307-777-6532
Fax: 307-777-5864

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Jennifer Bjerke-Mickle
Records Analyst
State of Wyoming
DEQ-Land Quality Division
Herschler Bldg., 3rd Flr. West
122 West 25th St.
Cheyenne, WY 82002
jennifer.mickle@wyo.gov
Phone: 307-777-6532
Fax: 307-777-5864

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: Jennifer Mickle
Subject: Re: looking for TFN 6 2/025 - RAMACO
Date: Tuesday, August 20, 2013 10:57:02 AM

Ok, thanks. I will just check the file again at some point soon.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Aug 20, 2013 at 10:37 AM, Jennifer Mickle <jennifer.mickle@wyo.gov> wrote:

> Matt~
>
> I have this marked as PRELIMINARY per Mark R. he said until further notice. So, all I have is the e-mail request for a TFN in the file. Not sure when we will get other info.
>
> Thanks Jen
>
> On Mon, Aug 19, 2013 at 10:32 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
> > Ok, thanks!
> >
> >
> > ---
> > Matt Kunze
> > Surface Water Hydrologist, Division Services
> > Wyoming Department of Environmental Quality, Land Quality Division
> > 122 West 25th Street
> > Herschler Building 3W
> > Cheyenne, WY 82002
> > 307-777-7055
> >
> >
> > On Mon, Aug 19, 2013 at 10:30 AM, Jennifer Mickle <jennifer.mickle@wyo.gov> wrote:
> >
> > > I have this file but have not received the package as of today. I have not gotten the mail this morning from Kim. So not sure if it will be in this morning or this afternoon. Will let you know when it comes in,
> > >
> > > Thanks Jen
> > >
> > > On Mon, Aug 19, 2013 at 10:25 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
> > >
> > > > Hi,
> > > >
> > > > I was wondering if anyone has a file out for this? It is a fairly new D3 TFN.
> > > >
> > > > Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--

Jennifer Bjerke-Mickle
Records Analyst
State of Wyoming
DEQ-Land Quality Division
Herschler Bldg., 3rd Flr. West
122 West 25th St.
Cheyenne, WY 82002
jennifer.mickle@wyo.gov
Phone: 307-777-6532
Fax: 307-777-5864

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--

Jennifer Bjerke-Mickle
Records Analyst
State of Wyoming
DEQ-Land Quality Division
Herschler Bldg., 3rd Flr. West
122 West 25th St.
Cheyenne, WY 82002
jennifer.mickle@wyo.gov
Phone: 307-777-6532
Fax: 307-777-5864

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: andrew kuhlmann
To: nancy.nuttbrock@wyo.gov; andrew kuhlmann
Subject: Invitation: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (nancy.nuttbrock@wyo.gov)
Date: Tuesday, April 22, 2014 9:58:45 AM
Attachments: invite.ics

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar nancy.nuttbrock@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account nancy.nuttbrock@wyo.gov because you are subscribed for invitations on calendar nancy.nuttbrock@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_68.ics (1075 Bytes) cannot be converted to PDF format.

From: Nancy Nuttbrock
To: andrew.kuhlmann@wyo.gov; Nancy Nuttbrock
Subject: Accepted: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (andrew.kuhlmann@wyo.gov)
Date: Tuesday, April 22, 2014 10:02:27 AM
Attachments: invite.ics

Nancy Nuttbrock has accepted this invitation.

Mtg w/ Andrew Emrich about Ramaco Coal

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar andrew.kuhlmann@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitation replies on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_69.ics (647 Bytes) cannot be converted to PDF format.

From:	Nancy Nuttbrock
To:	andrew kuhlmann; Mark Rogaczewski
Subject:	Re: Invitation: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (nancy.nuttbrock@wyo.gov)
Date:	Tuesday, April 22, 2014 10:04:02 AM

Please also extend this invitation to Mark Rogaczewski - Mark's calendar appears open at this time, and he'll be joining us by phone.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

On Tue, Apr 22, 2014 at 9:59 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

Mtg w/ Andrew Emrich about Ramaco Coal **more details »**

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar nancy.nuttbrock@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account nancy.nuttbrock@wyo.gov because you are subscribed for invitations on calendar nancy.nuttbrock@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: andrew kuhlmann
To: mark.rogaczewski@wyo.gov; Nancy Nuttbrock; andrew kuhlmann
Subject: Invitation: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (mark.rogaczewski@wyo.gov)
Date: Tuesday, April 22, 2014 10:04:51 AM
Attachments: invite.ics

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar mark.rogaczewski@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_70.ics (1223 Bytes) cannot be converted to PDF format.

From: andrew kuhlmann
To: Nancy Nuttbrock; Mark Rogaczewski
Subject: Mtg with counsel for Ramaco
Date: Tuesday, April 22, 2014 10:11:21 AM

Nancy and Mark,

I spoke to Andrew Emrich from Holland and Hart and set up a May 6th meeting.

Andrew informed me that his client is Ramaco, and they are looking at starting a mine (at a previous mine site) north of Sheridan. I found the following PDF through Google: http://www.ramacollc.com/upload/Ramaco%20Sheridan%20Profile%20February%202013.pdf

They also have a link about the site on their website: http://www.ramacollc.com/Development-Projects.html

Andrew said they are hoping to be submitting their application to LQD in the late summer. He wants to meet with us to discuss how to proceed if they encounter recalcitrant surface landowners. He said they don't know for sure that they will have problems getting consents, but I suspect they wouldn't ask us if they didn't already have some names in mind.

Nancy, would you like to meet in your office, or should I get one of the smaller conference rooms scheduled?

Thanks,
Andrew
--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Nancy Nuttbrock
To: andrew kuhlmann
Cc: Mark Rogaczewski
Subject: Re: Mtg with counsel for Ramaco
Date: Tuesday, April 22, 2014 10:15:22 AM

My office is fine (assuming H&H will bring 1 or 2 people). Thanks for this information, Andrew.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

On Tue, Apr 22, 2014 at 10:10 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Nancy and Mark,
>
> I spoke to Andrew Emrich from Holland and Hart and set up a May 6th meeting.
>
> Andrew informed me that his client is Ramaco, and they are looking at starting a mine (at a previous mine site) north of Sheridan. I found the following PDF through Google: http://www.ramacollc.com/upload/Ramaco%20Sheridan%20Profile%20February%202013.pdf
>
> They also have a link about the site on their website: http://www.ramacollc.com/Development-Projects.html
>
> Andrew said they are hoping to be submitting their application to LQD in the late summer. He wants to meet with us to discuss how to proceed if they encounter recalcitrant surface landowners. He said they don't know for sure that they will have problems getting consents, but I suspect they wouldn't ask us if they didn't already have some names in mind.
>
> Nancy, would you like to meet in your office, or should I get one of the smaller conference rooms scheduled?
>
> Thanks,
> Andrew
> --
> Andrew J. Kuhlmann
> Assistant Attorney General
> Water & Natural Resources Division
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

From:	andrew kuhlmann
To:	Nancy Nuttbrock
Cc:	Mark Rogaczewski
Subject:	Re: Mtg with counsel for Ramaco
Date:	Tuesday, April 22, 2014 12:24:47 PM

Nancy,

Mr. Emrich told me that he's the only one coming on behalf of Ramaco.

Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: andrew.kuhlmann@wyo.gov; Mark Rogaczewski
Subject: Accepted: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (andrew.kuhlmann@wyo.gov)
Date: Wednesday, April 23, 2014 6:43:13 AM
Attachments: invite.ics

Mark Rogaczewski has accepted this invitation.

Mtg w/ Andrew Emrich about Ramaco Coal

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar andrew.kuhlmann@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock
- Mark Rogaczewski

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitation replies on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_71.ics (649 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: BJ Kristiansen
Subject: Fwd: Mtg with counsel for Ramaco
Date: Wednesday, April 23, 2014 6:45:32 AM

Information on meeting set for May 6 to discuss landowner consent requirements and how to permit lands if a landowner will not provide consent.

Mark

---------- Forwarded message ----------
From: **Nancy Nuttbrock** <nancy.nuttbrock@wyo.gov>
Date: Tue, Apr 22, 2014 at 10:14 AM
Subject: Re: Mtg with counsel for Ramaco
To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>
Cc: Mark Rogaczewski <mark.rogaczewski@wyo.gov>

My office is fine (assuming H&H will bring 1 or 2 people). Thanks for this information, Andrew.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

On Tue, Apr 22, 2014 at 10:10 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Nancy and Mark,
>
> I spoke to Andrew Emrich from Holland and Hart and set up a May 6th meeting.
>
> Andrew informed me that his client is Ramaco, and they are looking at starting a mine (at a previous mine site) north of Sheridan. I found the following PDF through Google: http://www.ramacollc.com/upload/Ramaco%20Sheridan%20Profile%20February%202013.pdf
>
> They also have a link about the site on their website: http://www.ramacollc.com/Development-Projects.html
>
> Andrew said they are hoping to be submitting their application to LQD in the late summer. He wants to meet with us to discuss how to proceed if they encounter recalcitrant surface landowners. He said they don't know for sure that they will have problems getting consents, but I suspect they wouldn't ask us if they didn't already have some names in mind.
>
> Nancy, would you like to meet in your office, or should I get one of the smaller conference rooms scheduled?
>
> Thanks,
> Andrew
> --
> Andrew J. Kuhlmann
> Assistant Attorney General
> Water & Natural Resources Division
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From:	Mark Rogaczewski
To:	BJ Kristiansen
Subject:	Fwd: Mtg with counsel for Ramaco
Date:	Wednesday, April 23, 2014 6:47:53 AM

FYI - we will call in from my office.

Mark

---------- Forwarded message ----------
From: **andrew kuhlmann** <andrew.kuhlmann@wyo.gov>
Date: Tue, Apr 22, 2014 at 12:24 PM
Subject: Re: Mtg with counsel for Ramaco
To: Nancy Nuttbrock <nancy.nuttbrock@wyo.gov>
Cc: Mark Rogaczewski <mark.rogaczewski@wyo.gov>

Nancy,

Mr. Emrich told me that he's the only one coming on behalf of Ramaco.

Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From: BJ Kristiansen
To: andrew.kuhlmann@wyo.gov; BJ Kristiansen
Subject: Accepted: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (andrew.kuhlmann@wyo.gov)
Date: Wednesday, April 23, 2014 7:02:38 AM
Attachments: invite.ics

BJ Kristiansen has accepted this invitation.

Mtg w/ Andrew Emrich about Ramaco Coal

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar andrew.kuhlmann@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock
- Mark Rogaczewski
- BJ Kristiansen

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitation replies on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_72.ics (645 Bytes) cannot be converted to PDF format.

From: Andrew Emrich
To: andrew kuhlmann
Subject: RE: Upcoming meeting w/ Land Quality Division
Date: Friday, May 02, 2014 5:21:02 PM
Attachments: Background for 5-6-14 DEQ mtg..pdf
image001.gif

Andrew,

Here is the background paper for next Tuesday's meeting. Will you by chance have a conference number available? I'd like one of Ramaco's permitting folks to call-in, if possible. I'll be the only one at the meeting in person for Ramaco.

Thanks much & have a great weekend.

Andrew

Andrew C. Emrich, P.C.
Holland & Hart LLP
6380 South Fiddlers Green Circle, Suite 500
Greenwood Village, CO 80111
(303) 290-1621 phone
(307) 286-5120 mobile
(866) 711-8046 fax
acemrich@hollandhart.com

CONFIDENTIAL NOTICE: This message is PRIVILEGED AND CONFIDENTIAL. If you believe that this e-mail has been sent to you in error, please reply to notify the sender that you received the message in error, and please delete and disregard this e-mail. Thank you.

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Tuesday, April 29, 2014 3:25 PM
To: Andrew Emrich
Subject: Upcoming meeting w/ Land Quality Division

Andrew,

From our previous conversations, I remember you telling me that you already planned to send me a written agenda ahead of our meeting next week. And I forgot to mention during our last call that Nancy really appreciated your offer and was definitely interested in receiving an agenda. Go ahead and send it to me and I'll make sure it gets to her.

Right now, I believe the plan is for you, Nancy, and I to meet at her office on the 3rd floor, West Side, of the Herschler Building. And I believe one or two people from District 3 will probably be calling in. In case you need to get a hold of me, I will be out of the office the

rest of this week, but I will still have some email access. I'll be back in on Monday.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Background for 5/6 Meeting

- Ramaco Coal LLC purchased the coal mineral estate from Sheridan-Wyoming Coal Company, Inc. (SWCC) in 2011. Ramaco's coal estate was severed from the surface estate over fifty years ago through a series of severance deeds in which Ramaco's predecessor-in-interest, SWCC, conveyed the surface to private third parties, reserving the coal. The surface of a large portion of the property now is owned by two corporate landowners. The severance deed for their property reserved the right to use so much of the surface as necessary or convenient to mine coal and specified the per-acre amount of surface damages that are to be paid if the surface is used for mining of coal.

- Ramaco has been actively involved in pre-permitting activities for its proposed surface coal operation and plans to submit its Application for Permit to Mine in the late summer of 2014. As part of its planning efforts, Ramaco has entered into surface use agreements with the balance of the surface owners, who were not subject to the reserved surface use right and specified surface damages, and pursuant to agreement will receive an executed Surface Landowner's Consent (LQD Form 8) from each of these surface owners.

- Ramaco has, to date, been unable to obtain surface use agreements with the two surface owners subject to the reserved surface use right and specified surface damages, and it is possible that one or both of these surface owners may decline to execute the Surface Owner Consent form. It is Ramaco's belief that these surface owners are not "resident or agricultural landowners" under the WY Environmental Quality Act (WY EQA). WY STAT. ANN. (W.S.A.) § 35-11-406 (b) (xi).

- The WY EQA directs applicants for mining permits to attempt to obtain an "instrument of consent" from each affected surface owner, including non-residential/agricultural landowners. W.S.A. § 35-11-406 (b) (xii). Similarly, LQD Guideline No. 6A provides that mining applications should contain surface owner letters of consent on LQD Form 8. LQD Guideline 6A, Pt. 1, "Surface Owner Consent and Right of Entry."

- The WY EQA also entitles a permit applicant to petition the Wyoming Environmental Quality Council (EQC) for an "order in lieu of consent" from non-residential/agricultural surface owners who decline to provide the required letter of consent for a mine permit. W.S.A. § 35-11-406 (b) (xii).

- Neither the WY EQA nor LQD's regulations/guidance provide clear direction on when in the permitting process an applicant should seek an order in lieu of consent from an non-consenting surface owner, or more generally, how the EQC petition process intersects with the LQD permitting process.

- Ramaco is interested in finding a practical solution that allows its permit application to move forward even as it attempts to resolve any outstanding surface owner consents or seeks an order in lieu of consent from the EQC for non-consenting surface owners.

HOLLAND&HART.

THE LAW OUT WEST

From:	andrew kuhlmann
To:	Nancy Nuttbrock
Subject:	Upcoming meeting w/ Land Quality Division
Date:	Sunday, May 04, 2014 12:23:49 AM
Attachments:	Background for 5-6-14 DEQ mtg..pdf image001.gif

---------- Forwarded message ----------
From: **Andrew Emrich** <ACEmrich@hollandhart.com>
Date: Friday, May 2, 2014
Subject: Upcoming meeting w/ Land Quality Division
To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>

Andrew,

Here is the background paper for next Tuesday's meeting. Will you by chance have a conference number available? I'd like one of Ramaco's permitting folks to call-in, if possible. I'll be the only one at the meeting in person for Ramaco.

Thanks much & have a great weekend.

Andrew

Andrew C. Emrich, P.C.

Holland & Hart LLP

6380 South Fiddlers Green Circle, Suite 500

Greenwood Village, CO 80111

(303) 290-1621 phone

(307) 286-5120 mobile

(866) 711-8046 fax

acemrich@hollandhart.com

CONFIDENTIAL NOTICE: This message is PRIVILEGED AND CONFIDENTIAL. If you believe that this e-mail has been sent to you in error, please reply to notify the sender that you received the message in error, and please delete and disregard this e-mail. Thank you.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

Background for 5/6 Meeting

- Ramaco Coal LLC purchased the coal mineral estate from Sheridan-Wyoming Coal Company, Inc. (SWCC) in 2011. Ramaco's coal estate was severed from the surface estate over fifty years ago through a series of severance deeds in which Ramaco's predecessor-in-interest, SWCC, conveyed the surface to private third parties, reserving the coal. The surface of a large portion of the property now is owned by two corporate landowners. The severance deed for their property reserved the right to use so much of the surface as necessary or convenient to mine coal and specified the per-acre amount of surface damages that are to be paid if the surface is used for mining of coal.

- Ramaco has been actively involved in pre-permitting activities for its proposed surface coal operation and plans to submit its Application for Permit to Mine in the late summer of 2014. As part of its planning efforts, Ramaco has entered into surface use agreements with the balance of the surface owners, who were not subject to the reserved surface use right and specified surface damages, and pursuant to agreement will receive an executed Surface Landowner's Consent (LQD Form 8) from each of these surface owners.

- Ramaco has, to date, been unable to obtain surface use agreements with the two surface owners subject to the reserved surface use right and specified surface damages, and it is possible that one or both of these surface owners may decline to execute the Surface Owner Consent form. It is Ramaco's belief that these surface owners are not "resident or agricultural landowners" under the WY Environmental Quality Act (WY EQA). WY STAT. ANN. (W.S.A.) § 35-11-406 (b) (xi).

- The WY EQA directs applicants for mining permits to attempt to obtain an "instrument of consent" from each affected surface owner, including non-residential/agricultural landowners. W.S.A. § 35-11-406 (b) (xii). Similarly, LQD Guideline No. 6A provides that mining applications should contain surface owner letters of consent on LQD Form 8. LQD Guideline 6A, Pt. 1, "Surface Owner Consent and Right of Entry."

- The WY EQA also entitles a permit applicant to petition the Wyoming Environmental Quality Council (EQC) for an "order in lieu of consent" from non-residential/agricultural surface owners who decline to provide the required letter of consent for a mine permit. W.S.A. § 35-11-406 (b) (xii).

- Neither the WY EQA nor LQD's regulations/guidance provide clear direction on when in the permitting process an applicant should seek an order in lieu of consent from an non-consenting surface owner, or more generally, how the EQC petition process intersects with the LQD permitting process.

- Ramaco is interested in finding a practical solution that allows its permit application to move forward even as it attempts to resolve any outstanding surface owner consents or seeks an order in lieu of consent from the EQC for non-consenting surface owners.

HOLLAND&HART.

THE LAW OUT WEST

From:	Nancy Nuttbrock
To:	Mark Rogaczewski; BJ Kristiansen
Subject:	Fwd: Upcoming meeting w/ Land Quality Division
Date:	Monday, May 05, 2014 9:50:43 AM
Attachments:	Background for 5-6-14 DEQ mtg..pdf image001.gif

FYI, for tomorrow.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

---------- Forwarded message ----------
From: **andrew kuhlmann** <andrew.kuhlmann@wyo.gov>
Date: Sun, May 4, 2014 at 12:23 AM
Subject: Upcoming meeting w/ Land Quality Division
To: Nancy Nuttbrock <nancy.nuttbrock@wyo.gov>

---------- Forwarded message ----------
From: **Andrew Emrich** <ACEmrich@hollandhart.com>
Date: Friday, May 2, 2014
Subject: Upcoming meeting w/ Land Quality Division
To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>

Andrew,

Here is the background paper for next Tuesday's meeting. Will you by chance have a conference number available? I'd like one of Ramaco's permitting folks to call-in, if possible. I'll be the only one at the meeting in person for Ramaco.

Thanks much & have a great weekend.

Andrew

Andrew C. Emrich, P.C.

Holland & Hart LLP

6380 South Fiddlers Green Circle, Suite 500

Greenwood Village, CO 80111

(303) 290-1621 phone

(307) 286-5120 mobile

(866) 711-8046 fax

acemrich@hollandhart.com

CONFIDENTIAL NOTICE: This message is PRIVILEGED AND CONFIDENTIAL. If you believe that this e-mail has been sent to you in error, please reply to notify the sender that you received the message in error, and please delete and disregard this e-mail. Thank you.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Background for 5/6 Meeting

- Ramaco Coal LLC purchased the coal mineral estate from Sheridan-Wyoming Coal Company, Inc. (SWCC) in 2011. Ramaco's coal estate was severed from the surface estate over fifty years ago through a series of severance deeds in which Ramaco's predecessor-in-interest, SWCC, conveyed the surface to private third parties, reserving the coal. The surface of a large portion of the property now is owned by two corporate landowners. The severance deed for their property reserved the right to use so much of the surface as necessary or convenient to mine coal and specified the per-acre amount of surface damages that are to be paid if the surface is used for mining of coal.

- Ramaco has been actively involved in pre-permitting activities for its proposed surface coal operation and plans to submit its Application for Permit to Mine in the late summer of 2014. As part of its planning efforts, Ramaco has entered into surface use agreements with the balance of the surface owners, who were not subject to the reserved surface use right and specified surface damages, and pursuant to agreement will receive an executed Surface Landowner's Consent (LQD Form 8) from each of these surface owners.

- Ramaco has, to date, been unable to obtain surface use agreements with the two surface owners subject to the reserved surface use right and specified surface damages, and it is possible that one or both of these surface owners may decline to execute the Surface Owner Consent form. It is Ramaco's belief that these surface owners are not "resident or agricultural landowners" under the WY Environmental Quality Act (WY EQA). WY STAT. ANN. (W.S.A.) § 35-11-406 (b) (xi).

- The WY EQA directs applicants for mining permits to attempt to obtain an "instrument of consent" from each affected surface owner, including non-residential/agricultural landowners. W.S.A. § 35-11-406 (b) (xii). Similarly, LQD Guideline No. 6A provides that mining applications should contain surface owner letters of consent on LQD Form 8. LQD Guideline 6A, Pt. 1, "Surface Owner Consent and Right of Entry."

- The WY EQA also entitles a permit applicant to petition the Wyoming Environmental Quality Council (EQC) for an "order in lieu of consent" from non-residential/agricultural surface owners who decline to provide the required letter of consent for a mine permit. W.S.A. § 35-11-406 (b) (xii).

- Neither the WY EQA nor LQD's regulations/guidance provide clear direction on when in the permitting process an applicant should seek an order in lieu of consent from an non-consenting surface owner, or more generally, how the EQC petition process intersects with the LQD permitting process.

- Ramaco is interested in finding a practical solution that allows its permit application to move forward even as it attempts to resolve any outstanding surface owner consents or seeks an order in lieu of consent from the EQC for non-consenting surface owners.

HOLLAND&HART.

THE LAW OUT WEST

From:	Nancy Nuttbrock
To:	andrew kuhlmann; ACEmrich@hollandhart.com; Mark Rogaczewski; BJ Kristiansen
Subject:	Re: Upcoming meeting w/ Land Quality Division
Date:	Monday, May 05, 2014 10:08:28 AM
Attachments:	image001.gif

Good morning,

As long as we are only planning to call one person at Ramaco, and Mark and BJ in LQD's Sheridan office, I can make a 3-way call from my office, without using a conference line.

Looking forward to the discussion tomorrow morning at 11am.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

On Sun, May 4, 2014 at 12:23 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> ---------- Forwarded message ----------
> From: **Andrew Emrich** <ACEmrich@hollandhart.com>
> Date: Friday, May 2, 2014
> Subject: Upcoming meeting w/ Land Quality Division
> To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>
>
> Andrew,
>
> Here is the background paper for next Tuesday's meeting. Will you by chance have a conference number available? I'd like one of Ramaco's permitting folks to call-in, if possible. I'll be the only one at the meeting in person for Ramaco.
>
> Thanks much & have a great weekend.
>
> Andrew

Andrew C. Emrich, P.C.

Holland & Hart LLP

6380 South Fiddlers Green Circle, Suite 500

Greenwood Village, CO 80111

(303) 290-1621 phone

(307) 286-5120 mobile

(866) 711-8046 fax

acemrich@hollandhart.com

CONFIDENTIAL NOTICE: This message is PRIVILEGED AND CONFIDENTIAL. If you believe that this e-mail has been sent to you in error, please reply to notify the sender that you received the message in error, and please delete and disregard this e-mail. Thank you.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or

copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

HOLLAND&HART.

THE LAW OUT WEST

From:	BJ Kristiansen
To:	Nancy Nuttbrock
Subject:	RE: Upcoming meeting w/ Land Quality Division
Date:	Monday, May 05, 2014 10:38:03 AM
Attachments:	image001.gif

Thanks for the update Nancy.

-bj

From: Nancy Nuttbrock [mailto:nancy.nuttbrock@wyo.gov]
Sent: Monday, May 05, 2014 10:08 AM
To: andrew kuhlmann; ACEmrich@hollandhart.com; Mark Rogaczewski; BJ Kristiansen
Subject: Re: Upcoming meeting w/ Land Quality Division

Good morning,

As long as we are only planning to call one person at Ramaco, and Mark and BJ in LQD's Sheridan office, I can make a 3-way call from my office, without using a conference line.

Looking forward to the discussion tomorrow morning at 11am.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

On Sun, May 4, 2014 at 12:23 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> ---------- Forwarded message ----------
> From: **Andrew Emrich** <ACEmrich@hollandhart.com>
> Date: Friday, May 2, 2014
> Subject: Upcoming meeting w/ Land Quality Division
> To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>
>
> Andrew,
>
> Here is the background paper for next Tuesday's meeting. Will you by chance have a conference number available? I'd like one of Ramaco's permitting folks to call-in, if possible. I'll be the only one at the meeting in person for Ramaco.

Thanks much & have a great weekend.

Andrew

Andrew C. Emrich, P.C.
Holland & Hart LLP
6380 South Fiddlers Green Circle, Suite 500
Greenwood Village, CO 80111
(303) 290-1621 phone
(307) 286-5120 mobile
(866) 711-8046 fax
acemrich@hollandhart.com

CONFIDENTIAL NOTICE: This message is PRIVILEGED AND CONFIDENTIAL. If you believe that this e-mail has been sent to you in error, please reply to notify the sender that you received the message in error, and please delete and disregard this e-mail. Thank you.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--

Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

HOLLAND&HART.

THE LAW OUT WEST

From: Google Calendar
To: Mark Rogaczewski; andrew kuhlmann
Subject: Reminder: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (mark.rogaczewski@wyo.gov)
Date: Tuesday, May 06, 2014 10:50:37 AM

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

BJ - Please join us for this meeting if your schedule allows. RAMACO has contacted the AG's office with questions/concerns on how to permit lands if the landowner will not provide consent.

Thanks,
Mark

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar mark.rogaczewski@wyo.gov

Who
- andrew kuhlmann - organizer
- Mark Rogaczewski
- Nancy Nuttbrock
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for reminders on calendar mark.rogaczewski@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From:	Nancy Nuttbrock
To:	Jim Ruby
Cc:	Todd Parfitt; acemrich@hollandhart.com; andrew kuhlmann
Subject:	Re: Ramaco Coal Mine Application
Date:	Tuesday, May 13, 2014 11:02:59 PM

Sure Jim. Let me know if you cant view my calendar-you're welcome to schedule any open slots. Would it be appropriate to also include Andrew Kuhlman, as he was involved with our discussion with Ramaco last week?

On May 13, 2014 2:50 PM, "Jim Ruby" <jim.ruby@wyo.gov> wrote:

> Hi:
> I had a meeting with Andrew from Holland and Hart regarding the council's ability to give in lieu of consent on mining plans and reclamation plans. Do the two of you have time to meet with Andrew and I to discuss the process that would be the most streamlined for this matter.
>
> Thanks
>
> Jim
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Jim Ruby
To: Nancy Nuttbrock
Cc: Todd Parfitt; acemrich@hollandhart.com; andrew kuhlmann
Subject: Re: Ramaco Coal Mine Application
Date: Wednesday, May 14, 2014 2:11:29 PM

Hi Nancy:

having Andrew Kuhlman there would be great. I am waiting to hear from Andrew at Holland and Hart on dates he has available and from Todd. How do I get to your calendar?

Jim

On Tue, May 13, 2014 at 11:02 PM, Nancy Nuttbrock <nancy.nuttbrock@wyo.gov> wrote:

> Sure Jim. Let me know if you cant view my calendar-you're welcome to schedule any open slots. Would it be appropriate to also include Andrew Kuhlman, as he was involved with our discussion with Ramaco last week?
>
> On May 13, 2014 2:50 PM, "Jim Ruby" <jim.ruby@wyo.gov> wrote:
>
> > Hi:
> > I had a meeting with Andrew from Holland and Hart regarding the council's ability to give in lieu of consent on mining plans and reclamation plans. Do the two of you have time to meet with Andrew and I to discuss the process that would be the most streamlined for this matter.
> >
> > Thanks
> >
> > Jim
> >
> > E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Andrew Emrich
To:	Jim Ruby; Nancy Nuttbrock
Cc:	Todd Parfitt; andrew kuhlmann
Subject:	RE: Ramaco Coal Mine Application
Date:	Thursday, May 15, 2014 8:38:30 AM

Thanks for organizing this, Jim.

I have good availability for a meeting almost any time next week if that works with others.

Andrew

From: Jim Ruby [mailto:jim.ruby@wyo.gov]
Sent: Wednesday, May 14, 2014 2:11 PM
To: Nancy Nuttbrock
Cc: Todd Parfitt; Andrew Emrich; andrew kuhlmann
Subject: Re: Ramaco Coal Mine Application

Hi Nancy:

having Andrew Kuhlman there would be great. I am waiting to hear from Andrew at Holland and Hart on dates he has available and from Todd. How do I get to your calendar?

Jim

On Tue, May 13, 2014 at 11:02 PM, Nancy Nuttbrock <nancy.nuttbrock@wyo.gov> wrote:

Sure Jim. Let me know if you cant view my calendar-you're welcome to schedule any open slots. Would it be appropriate to also include Andrew Kuhlman, as he was involved with our discussion with Ramaco last week?

On May 13, 2014 2:50 PM, "Jim Ruby" <jim.ruby@wyo.gov> wrote:
Hi:
I had a meeting with Andrew from Holland and Hart regarding the council's ability to give in lieu of consent on mining plans and reclamation plans. Do the two of you have time to meet with Andrew and I to discuss the process that would be the most streamlined for this matter.

Thanks

Jim
E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Jim Ruby
To: andrew kuhlmann; Todd Parfitt; Nancy Nuttbrock; acemrich@hollandhart.com
Subject: Ramaco meeting
Date: Thursday, May 15, 2014 8:53:41 AM

Hello:

Nancy and I are both available to meet at 2:00 p.m. Monday to talk about the process for the council to grant consent in lieu of landowners consent for surface mining under 35-11-406 (b)(xii). Would that work for each of you? Todd can we meet in your office?

Jim

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: "jim.ruby@wyo.gov" <jim.ruby@wyo.gov> on behalf of jim.ruby@wyo.gov
To: todd.parfitt@wyo.gov; andrew.kuhlmann@wyo.gov; nancy.nuttbrock@wyo.gov; jim.ruby@wyo.gov; jim.ruby@wyo.gov
Cc: andrew.kuhlmann@wyo.gov; todd.parfitt@wyo.gov; nancy.nuttbrock@wyo.gov
Subject: [Update] Meeting on Ramaco process
Date: Thursday, May 15, 2014 8:57:29 AM

I am waiting to hear from Mr. Emerich from Holland and Hart.

Meeting on Ramaco process

When Mon May 19, 2014 2pm – 3pm Mountain Time

Who
- Jim Ruby - organizer

From: Jim Ruby
To: andrew.kuhlmann@wyo.gov; Todd Parfitt; Nancy Nuttbrock; Jim Ruby
Subject: Invitation: Meeting on Ramaco process @ Mon May 19, 2014 2pm - 3pm (andrew.kuhlmann@wyo.gov)
Date: Thursday, May 15, 2014 9:02:44 AM
Attachments: invite.ics

Meeting on Ramaco process

more details »

When Mon May 19, 2014 2pm – 3pm Mountain Time

Where Office of Todd Parfitt (map)

Calendar andrew.kuhlmann@wyo.gov

Who
- Jim Ruby - organizer
- Todd Parfitt
- Nancy Nuttbrock
- andrew kuhlmann

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_73.ics (1339 Bytes) cannot be converted to PDF format.

From:	andrew kuhlmann
To:	Jim Ruby
Cc:	Todd Parfitt; Nancy Nuttbrock; Andrew Emrich
Subject:	Re: Ramaco meeting
Date:	Thursday, May 15, 2014 9:46:26 AM

Unfortunately, Monday is the one day next week when I'm not available. I have to be in Rock Springs.

Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Jim Ruby
To:	andrew kuhlmann
Cc:	Todd Parfitt; Nancy Nuttbrock; Andrew Emrich
Subject:	Re: Ramaco meeting
Date:	Thursday, May 15, 2014 9:48:34 AM

Todd, Nancy: Should I find another time so Andrew K. can be there or should we go ahead and keep 2 on Monday?

Jim

On Thu, May 15, 2014 at 9:46 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Unfortunately, Monday is the one day next week when I'm not available. I have to be in Rock Springs.
>
> Andrew
>
> --
> Andrew J. Kuhlmann
> Assistant Attorney General
> Water & Natural Resources Division
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Jim Ruby
To: nancy.nuttbrock@wyo.gov; Todd Parfitt; andrew kuhlmann; Jim Ruby
Subject: Updated Invitation: Meeting on Ramaco process @ Wed May 21, 2014 3pm - 4pm (nancy.nuttbrock@wyo.gov)
Date: Thursday, May 15, 2014 9:52:06 AM
Attachments: invite.ics

This event has been changed.

Meeting on Ramaco process

more details »

When **Changed:** Wed May 21, 2014 3pm – 4pm Mountain Time

Where Office of Todd Parfitt (map)

Calendar nancy.nuttbrock@wyo.gov

Who
- Jim Ruby - organizer
- Nancy Nuttbrock
- Todd Parfitt
- andrew kuhlmann

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account nancy.nuttbrock@wyo.gov because you are subscribed for updated invitations on calendar nancy.nuttbrock@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_74.ics (1339 Bytes) cannot be converted to PDF format.

From: Jim Ruby
To: andrew kuhlmann
Cc: Andrew Emrich
Subject: Re: Ramaco meeting
Date: Thursday, May 15, 2014 9:55:54 AM

I have changed the time and date of the meeting to 3:00 p.m. next Wednesday.

Jim

On Thu, May 15, 2014 at 9:46 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Unfortunately, Monday is the one day next week when I'm not available. I have to be in Rock Springs.
>
> Andrew
>
> --
> Andrew J. Kuhlmann
> Assistant Attorney General
> Water & Natural Resources Division
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: andrew kuhlmann
To: Nancy Nuttbrock
Subject: Prep for Ramaco Meeting
Date: Thursday, May 15, 2014 9:58:17 AM

Nancy,

I noticed that Jim moved the meeting to Wednesday, and I can make the new date. I'd like to chat with you sometime before in preparation for the meeting. Let me know if there's a good time for a call or meeting between now and then. I will be out of the office tomorrow and Monday, but I can arrange to be available for a call or meeting tomorrow if that day works best. I'll also be in Tuesday and Wednesday next week.

Thanks,
Andrew
--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Andrew Emrich
To: Jim Ruby; andrew kuhlmann
Subject: RE: Ramaco meeting
Date: Thursday, May 15, 2014 10:15:43 AM

I'll be there. Thanks, Jim.

Andrew

From: Jim Ruby [mailto:jim.ruby@wyo.gov]
Sent: Thursday, May 15, 2014 9:56 AM
To: andrew kuhlmann
Cc: Andrew Emrich
Subject: Re: Ramaco meeting

I have changed the time and date of the meeting to 3:00 p.m. next Wednesday.

Jim

On Thu, May 15, 2014 at 9:46 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:
Unfortunately, Monday is the one day next week when I'm not available. I have to be in Rock Springs.

Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946
E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Nancy Nuttbrock
To: andrew kuhlmann
Subject: Re: Prep for Ramaco Meeting
Date: Thursday, May 15, 2014 10:34:48 AM

Sure, Andrew. Youre welcome to look at my calendar and schedule some time for us to visit.

On May 15, 2014 9:58 AM, "andrew kuhlmann" <andrew.kuhlmann@wyo.gov> wrote:

> Nancy,
>
> I noticed that Jim moved the meeting to Wednesday, and I can make the new date. I'd like to chat with you sometime before in preparation for the meeting. Let me know if there's a good time for a call or meeting between now and then. I will be out of the office tomorrow and Monday, but I can arrange to be available for a call or meeting tomorrow if that day works best. I'll also be in Tuesday and Wednesday next week.
>
> Thanks,
> Andrew
> --
> Andrew J. Kuhlmann
> Assistant Attorney General
> Water & Natural Resources Division
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: andrew kuhlmann
To: nancy.nuttbrock@wyo.gov; andrew kuhlmann
Subject: Invitation: Prep Meeting re: Ramaco process @ Tue May 20, 2014 11am - 12pm (nancy.nuttbrock@wyo.gov)
Date: Thursday, May 15, 2014 4:30:44 PM
Attachments: invite.ics

Prep Meeting re: Ramaco process

more details »

Meeting to discuss Ramaco's potential petition to the EQC prior to the May 21st meeting w/ Director Parfitt, Jim Ruby, and Ramaco's legal counsel

When Tue May 20, 2014 11am – 12pm Mountain Time

Where Nancy's Office (map)

Calendar nancy.nuttbrock@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account nancy.nuttbrock@wyo.gov because you are subscribed for invitations on calendar nancy.nuttbrock@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_75.ics (1237 Bytes) cannot be converted to PDF format.

From: Matthew Kunze
To: Bj Kristiansen
Subject: Brook Mine permit application
Date: Tuesday, June 03, 2014 7:46:03 AM

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Brook Mine permit application
Date: Tuesday, June 03, 2014 8:52:49 AM

Matt,

We have been in communication with RAMACO pretty continuously for the past year and it does look like the August time frame for the application is still a possibility. There are some problems with surface owner consent which will change the permit boundary significantly, depending on the outcome of land negotiations. A CHIA will be an interesting exercise in modeling as the mine is surrounded by old, abandoned underground mines as well as a series of NE-SW trending faults that chop up the lithology. AND the Tongue River flows through the area. AND this is an underground mine. I was the geologist at the Bighorn Coal mine back in the late 1980's and groundwater was always difficult to deal with as our models fell apart when viewing the groundwater regime at any distance over about a mile. Good times. We'll have fun.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, June 03, 2014 7:46 AM
To: Bj Kristiansen
Subject: Brook Mine permit application

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Cc: Muthu Kuchanur
Subject: Re: Brook Mine permit application
Date: Tuesday, June 03, 2014 10:20:00 AM

Ok, thanks for the reply BJ. Please keep us posted on the timeline.

I'm glad you are familiar with the complexities of the area; it does sound like this would be an interesting CHIA with the past coal mining, AVFs, etc.

It will be interesting to see the Brook Mine predictions on groundwater drawdown extent once the application is submitted. The first thing we would have to determine is what other coal mining activities would need considered in the analysis, i.e., is there potential for cumulative impacts. It will obviously be easier if the Youngs Creek Mine does not need to be included. Another interesting item is that LQD gave Big Horn groundwater release/verification in 2003, and I think all the monitoring wells are gone-?

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Jun 3, 2014 at 8:54 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> We have been in communication with RAMACO pretty continuously for the past year and it does look like the August time frame for the application is still a possibility. There are some problems with surface owner consent which will change the permit boundary significantly, depending on the outcome of land negotiations. A CHIA will be an interesting exercise in modeling as the mine is surrounded by old, abandoned underground mines as well as a series of NE-SW trending faults that chop up the lithology. AND the Tongue River flows through the area. AND this is an underground mine. I was the geologist at the Bighorn Coal mine back in the late 1980's and groundwater was always difficult to deal with as our models fell apart when viewing the groundwater regime at any distance over about a mile. Good times. We'll have fun.
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]

Sent: Tuesday, June 03, 2014 7:46 AM
To: Bj Kristiansen
Subject: Brook Mine permit application

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Brook Mine permit application
Date: Tuesday, June 03, 2014 10:46:09 AM

Matt,

Let me check on the old water wells from Big Horn Coal. There may still be some in existence being used as domestic or stock wells. I know the landman that RAMACO is using and he may know. More to follow…

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, June 03, 2014 10:20 AM
To: BJ Kristiansen
Cc: Muthu Kuchanur
Subject: Re: Brook Mine permit application

Ok, thanks for the reply BJ. Please keep us posted on the timeline.

I'm glad you are familiar with the complexities of the area; it does sound like this would be an interesting CHIA with the past coal mining, AVFs, etc.

It will be interesting to see the Brook Mine predictions on groundwater drawdown extent once the application is submitted. The first thing we would have to determine is what other coal mining activities would need considered in the analysis, i.e., is there potential for cumulative impacts. It will obviously be easier if the Youngs Creek Mine does not need to be included. Another interesting item is that LQD gave Big Horn groundwater release/verification in 2003, and I think all the monitoring wells are gone-?

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Jun 3, 2014 at 8:54 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> We have been in communication with RAMACO pretty continuously for the past year and it does look like the August time frame for the application is still a possibility. There are some problems with surface owner consent which will change the permit boundary significantly, depending on

the outcome of land negotiations. A CHIA will be an interesting exercise in modeling as the mine is surrounded by old, abandoned underground mines as well as a series of NE-SW trending faults that chop up the lithology. AND the Tongue River flows through the area. AND this is an underground mine. I was the geologist at the Bighorn Coal mine back in the late 1980's and groundwater was always difficult to deal with as our models fell apart when viewing the groundwater regime at any distance over about a mile. Good times. We'll have fun.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, June 03, 2014 7:46 AM
To: Bj Kristiansen
Subject: Brook Mine permit application

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Muthu Kuchanur
Subject:	Fwd: Brook Mine permit application
Date:	Tuesday, June 03, 2014 10:57:22 AM

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

---------- Forwarded message ----------
From: **BJ Kristiansen** <bj.kristiansen@wyo.gov>
Date: Tue, Jun 3, 2014 at 10:47 AM
Subject: RE: Brook Mine permit application
To: Matthew Kunze <matthew.kunze@wyo.gov>

Matt,

Let me check on the old water wells from Big Horn Coal. There may still be some in existence being used as domestic or stock wells. I know the landman that RAMACO is using and he may know. More to follow…

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, June 03, 2014 10:20 AM
To: BJ Kristiansen
Cc: Muthu Kuchanur
Subject: Re: Brook Mine permit application

Ok, thanks for the reply BJ. Please keep us posted on the timeline.

I'm glad you are familiar with the complexities of the area; it does sound like this would be an interesting CHIA with the past coal mining, AVFs, etc.

It will be interesting to see the Brook Mine predictions on groundwater drawdown extent once the application is submitted. The first thing we would have to determine is what other coal mining activities would need considered in the analysis, i.e., is there potential for cumulative impacts. It will obviously be easier if the Youngs Creek Mine does not need to be included. Another interesting item is that LQD gave Big Horn groundwater release/verification in 2003, and I think all the monitoring wells are gone-?

Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Tue, Jun 3, 2014 at 8:54 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> We have been in communication with RAMACO pretty continuously for the past year and it does look like the August time frame for the application is still a possibility. There are some problems with surface owner consent which will change the permit boundary significantly, depending on the outcome of land negotiations. A CHIA will be an interesting exercise in modeling as the mine is surrounded by old, abandoned underground mines as well as a series of NE-SW trending faults that chop up the lithology. AND the Tongue River flows through the area. AND this is an underground mine. I was the geologist at the Bighorn Coal mine back in the late 1980's and groundwater was always difficult to deal with as our models fell apart when viewing the groundwater regime at any distance over about a mile. Good times. We'll have fun.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, June 03, 2014 7:46 AM
To: Bj Kristiansen
Subject: Brook Mine permit application

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Brook Mine permit application
Date: Tuesday, September 09, 2014 2:26:36 PM

Hi BJ,

Just wondering if you had heard any updates on when a full application might be submitted, now that August has come and gone.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Jun 3, 2014 at 10:47 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Let me check on the old water wells from Big Horn Coal. There may still be some in existence being used as domestic or stock wells. I know the landman that RAMACO is using and he may know. More to follow…
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Tuesday, June 03, 2014 10:20 AM
> **To:** BJ Kristiansen
> **Cc:** Muthu Kuchanur
> **Subject:** Re: Brook Mine permit application
>
> Ok, thanks for the reply BJ. Please keep us posted on the timeline.
>
> I'm glad you are familiar with the complexities of the area; it does sound like this would be an interesting CHIA with the past coal mining, AVFs, etc.
>
> It will be interesting to see the Brook Mine predictions on groundwater drawdown

extent once the application is submitted. The first thing we would have to determine is what other coal mining activities would need considered in the analysis, i.e., is there potential for cumulative impacts. It will obviously be easier if the Youngs Creek Mine does not need to be included. Another interesting item is that LQD gave Big Horn groundwater release/verification in 2003, and I think all the monitoring wells are gone-?

Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Tue, Jun 3, 2014 at 8:54 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> We have been in communication with RAMACO pretty continuously for the past year and it does look like the August time frame for the application is still a possibility. There are some problems with surface owner consent which will change the permit boundary significantly, depending on the outcome of land negotiations. A CHIA will be an interesting exercise in modeling as the mine is surrounded by old, abandoned underground mines as well as a series of NE-SW trending faults that chop up the lithology. AND the Tongue River flows through the area. AND this is an underground mine. I was the geologist at the Bighorn Coal mine back in the late 1980's and groundwater was always difficult to deal with as our models fell apart when viewing the groundwater regime at any distance over about a mile. Good times. We'll have fun.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, June 03, 2014 7:46 AM
To: Bj Kristiansen
Subject: Brook Mine permit application

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Brook Mine permit application
Date: Tuesday, September 09, 2014 3:04:42 PM

Matt,

I have been visiting with Ramaco to figure out when their application will be coming to us and it looks like another 2 months yet. They are struggling with some Form 8 issues.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, September 09, 2014 2:27 PM
To: BJ Kristiansen
Subject: Re: Brook Mine permit application

Hi BJ,

Just wondering if you had heard any updates on when a full application might be submitted, now that August has come and gone.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Jun 3, 2014 at 10:47 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Let me check on the old water wells from Big Horn Coal. There may still be some in existence being used as domestic or stock wells. I know the landman that RAMACO is using and he may know. More to follow…
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Tuesday, June 03, 2014 10:20 AM
> **To:** BJ Kristiansen
> **Cc:** Muthu Kuchanur
> **Subject:** Re: Brook Mine permit application

Ok, thanks for the reply BJ. Please keep us posted on the timeline.

I'm glad you are familiar with the complexities of the area; it does sound like this would be an interesting CHIA with the past coal mining, AVFs, etc.

It will be interesting to see the Brook Mine predictions on groundwater drawdown extent once the application is submitted. The first thing we would have to determine is what other coal mining activities would need considered in the analysis, i.e., is there potential for cumulative impacts. It will obviously be easier if the Youngs Creek Mine does not need to be included. Another interesting item is that LQD gave Big Horn groundwater release/verification in 2003, and I think all the monitoring wells are gone-?

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Jun 3, 2014 at 8:54 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> We have been in communication with RAMACO pretty continuously for the past year and it does look like the August time frame for the application is still a possibility. There are some problems with surface owner consent which will change the permit boundary significantly, depending on the outcome of land negotiations. A CHIA will be an interesting exercise in modeling as the mine is surrounded by old, abandoned underground mines as well as a series of NE-SW trending faults that chop up the lithology. AND the Tongue River flows through the area. AND this is an underground mine. I was the geologist at the Bighorn Coal mine back in the late 1980's and groundwater was always difficult to deal with as our models fell apart when viewing the groundwater regime at any distance over about a mile. Good times. We'll have fun.
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Tuesday, June 03, 2014 7:46 AM
> **To:** Bj Kristiansen
> **Subject:** Brook Mine permit application
>
> Hi BJ,
>
> I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA

for it later in the year.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Cc: Muthu Kuchanur
Subject: Re: Brook Mine permit application
Date: Tuesday, September 09, 2014 3:19:49 PM

Ok, thanks for the update.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Sep 9, 2014 at 3:07 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I have been visiting with Ramaco to figure out when their application will be coming to us and it looks like another 2 months yet. They are struggling with some Form 8 issues.
>
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Tuesday, September 09, 2014 2:27 PM
> **To:** BJ Kristiansen
> **Subject:** Re: Brook Mine permit application
>
> Hi BJ,
>
> Just wondering if you had heard any updates on when a full application might be submitted, now that August has come and gone.
>
> Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Tue, Jun 3, 2014 at 10:47 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Let me check on the old water wells from Big Horn Coal. There may still be some in existence being used as domestic or stock wells. I know the landman that RAMACO is using and he may know. More to follow…
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Tuesday, June 03, 2014 10:20 AM
> **To:** BJ Kristiansen
> **Cc:** Muthu Kuchanur
> **Subject:** Re: Brook Mine permit application
>
> Ok, thanks for the reply BJ. Please keep us posted on the timeline.
>
> I'm glad you are familiar with the complexities of the area; it does sound like this would be an interesting CHIA with the past coal mining, AVFs, etc.
>
> It will be interesting to see the Brook Mine predictions on groundwater

drawdown extent once the application is submitted. The first thing we would have to determine is what other coal mining activities would need considered in the analysis, i.e., is there potential for cumulative impacts. It will obviously be easier if the Youngs Creek Mine does not need to be included. Another interesting item is that LQD gave Big Horn groundwater release/verification in 2003, and I think all the monitoring wells are gone-?

Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Tue, Jun 3, 2014 at 8:54 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> We have been in communication with RAMACO pretty continuously for the past year and it does look like the August time frame for the application is still a possibility. There are some problems with surface owner consent which will change the permit boundary significantly, depending on the outcome of land negotiations. A CHIA will be an interesting exercise in modeling as the mine is surrounded by old, abandoned underground mines as well as a series of NE-SW trending faults that chop up the lithology. AND the Tongue River flows through the area. AND this is an underground mine. I was the geologist at the Bighorn Coal mine back in the late 1980's and groundwater was always difficult to deal with as our models fell apart when viewing the groundwater regime at any distance over about a mile. Good times. We'll have fun.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, June 03, 2014 7:46 AM
To: Bj Kristiansen
Subject: Brook Mine permit application

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Nancy Nuttbrock; carol.bilbrough@wyo.gov; andrew.kuhlmann@wyo.gov
Cc:	mark.rogaczewski@wyo.gov; jbarron@wwcengineering.com
Subject:	RAMACO permit application imminent
Date:	Friday, October 10, 2014 10:04:52 AM
Attachments:	image003.jpg

Nancy,

Mark and I just finished meeting with Jeff Baron, the lead engineer from Western Water Consultants Engineering (WWC) handling the RAMACO mine permit application. There are several issues with this application that require input from you and Carol as well as Andrew. They are as follows:

1. RAMACO is submitting the coal Mine Permit Application on Monday, October 27, 2014. They have an issue with the current surface owners, Ambre Energy, regarding the completion of a Form 8. RAMACO purchased the coal from Sheridan-Wyo Coal Company several years ago. This includes the coal beneath Ambre's surface. A deed to the coal from 1954 apparently gives the coal owner the right to access the surface and mine the coal. Ambre has not signed a Form 8 and is taking the position that they will not cooperate with RAMACO regarding a surface use agreement. The consultants from WWC are submitting the original 1954 deed to the coal in their permit application and using that as evidence that they have the right to access the coal resource and mine it. When we receive the permit application and begin the completeness review, we will be forwarding the deed to Andrew for his determination about its legal standing as related to surface owner consent. If it serves as a vehicle to allow surface use then we can use it in lieu of a Form 8 and progress from there. Since we have 60 days from the time of submittal to declare the document complete, we should have enough time to allow Andrew to make his determination. If it takes longer than 60 days, we will confer with you and Andrew about the next actions we should take related to the application technical review.

2. Carol, RAMACO wants to use e-permitting for this coal submittal. Jeff Baron informed us he is ready to get started on the process and would like your direction at this time. If nothing else, he will have the PDF version of the application ready for submittal at the same time he submits the two paper copies. I have encouraged the operators to provide PDF versions of paperwork in the past so that we can have multiple reviewers working on the documents simultaneously. He wants to know what steps to follow from this point. His email address is listed above in the Cc.. row. If it does not come through for some reason it is jbarron@wwcengineering.com. When you are ready to instruct him let me know what I need to do to facilitate the experience. RER will be submitting their non-coal application around the new year and the work we do now will help us establish a process for permit applications when RER comes along.

I have every reason to believe that you will contact me with questions and comments. I would be surprised if there were none. We live in interesting times.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	andrew kuhlmann
To:	BJ Kristiansen
Cc:	Nancy Nuttbrock; Carol Bilbrough; Mark Rogaczewski
Subject:	Re: RAMACO permit application imminent
Date:	Friday, October 10, 2014 12:11:14 PM

BJ,

I appreciate the heads-up. I'll be ready to take a look at the deed when it comes in.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Thomas Sansonetti
To: andrew.kuhlmann@wyo.gov
Subject: Got any time this week to discuss Ramaco permit application?
Date: Tuesday, November 11, 2014 8:32:38 PM

Hi Andrew!

RAMACO's Brook Mine application has received it's WDEQ completeness letter. May I update you on the access issue versus Ambre and Padlock Ranch? Tom

Sent from my iPhone

From: andrew kuhlmann
To: Thomas Sansonetti
Subject: Re: Got any time this week to discuss Ramaco permit application?
Date: Wednesday, November 12, 2014 4:46:13 PM

Tom,

I'd be happy to talk with you about the application. Unfortunately, my week is pretty packed. Could I give you a call next Wednesday, or is that too late?

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: RE: Got any time to discuss Ramaco permit application?
Date: Wednesday, November 12, 2014 4:54:50 PM

Hi Andrew!

Actually, I have a better idea since it has been a while since we have seen each other. Next week I am going to be in Cheyenne in the late afternoon of November 17 and most of the day on November 18 before heading to Denver that evening.

Please give me a thirty minute window to come by your office and then we can chat briefly about the Ramaco application and I can hand deliver a packet that I was otherwise going to have to mail to you. Does that work? Tom

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Wednesday, November 12, 2014 4:46 PM
To: Thomas Sansonetti
Subject: Re: Got any time this week to discuss Ramaco permit application?

Tom,

I'd be happy to talk with you about the application. Unfortunately, my week is pretty packed. Could I give you a call next Wednesday, or is that too late?

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Kim Pandullo
Subject:	CHIA folder info
Date:	Thursday, November 13, 2014 8:06:10 AM

Brook Mine (proposed new mine)
TFN 6 2/025
CHIA 39

Thanks!

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: FW: Got any time to discuss Ramaco permit application?
Date: Friday, November 14, 2014 1:09:58 PM

Hi Andrew!

Per below request. Any openings? Tom

From: Thomas Sansonetti
Sent: Wednesday, November 12, 2014 4:54 PM
To: 'andrew kuhlmann'
Subject: RE: Got any time to discuss Ramaco permit application?

Hi Andrew!

Actually, I have a better idea since it has been a while since we have seen each other. Next week I am going to be in Cheyenne in the late afternoon of November 17 and most of the day on November 18 before heading to Denver that evening.

Please give me a thirty minute window to come by your office and then we can chat briefly about the Ramaco application and I can hand deliver a packet that I was otherwise going to have to mail to you. Does that work? Tom

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Wednesday, November 12, 2014 4:46 PM
To: Thomas Sansonetti
Subject: Re: Got any time this week to discuss Ramaco permit application?

Tom,

I'd be happy to talk with you about the application. Unfortunately, my week is pretty packed. Could I give you a call next Wednesday, or is that too late?

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at

(307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: andrew kuhlmann
To: Thomas Sansonetti
Subject: Re: Got any time to discuss Ramaco permit application?
Date: Sunday, November 16, 2014 8:22:17 PM

Tom,

I was hoping to be around while you were up in Cheyenne and it was kind of up in the air, but as of tonight, it looks like I will be out of town both Monday and Tuesday. However, you're still welcome to drop off the packet if that will save you the trouble of mailing it. My office is in the Natural Resources Division offices on the 2nd floor of the Pioneer Building.

It may work better to wait until next week to talk, anyway. I actually haven't been able to see a copy of the deed yet. I thought I would have one by now, but it now looks like it won't be until at least sometime later this week. I'll plan on giving you a call when I have it.

Travel safe and sorry for not getting back to you sooner.

Andrew
--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

From:	Thomas Sansonetti
To:	andrew kuhlmann
Subject:	RE: Got any time to discuss Ramaco permit application?
Date:	Sunday, November 16, 2014 8:30:37 PM

No problem, Andrew. But I do appreciate your getting back to me.

I will drop off the packet for you. It contains other examples of WDEQ approval of mineral permits where the deed language controlled.

Let's aim for a visit after Thanksgiving when you have had time to review the situation. I need to get my client Ramaco's mine up and running by early 2016 to meet delivery commitments to two utilities. Tom

---

From: andrew kuhlmann [andrew.kuhlmann@wyo.gov]
Sent: Sunday, November 16, 2014 8:22 PM
To: Thomas Sansonetti
Subject: Re: Got any time to discuss Ramaco permit application?

Tom,

I was hoping to be around while you were up in Cheyenne and it was kind of up in the air, but as of tonight, it looks like I will be out of town both Monday and Tuesday. However, you're still welcome to drop off the packet if that will save you the trouble of mailing it. My office is in the Natural Resources Division offices on the 2nd floor of the Pioneer Building.

It may work better to wait until next week to talk, anyway. I actually haven't been able to see a copy of the deed yet. I thought I would have one by now, but it now looks like it won't be until at least sometime later this week. I'll plan on giving you a call when I have it.

Travel safe and sorry for not getting back to you sooner.

Andrew
--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: andrew kuhlmann
To: Thomas Sansonetti
Subject: Re: Got any time to discuss Ramaco permit application?
Date: Sunday, November 16, 2014 8:55:05 PM

Tom,

After Thanksgiving sounds like a good plan. I'm looking forward to reviewing the packet. I appreciate you taking time to gather those materials.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

From:	Matthew Kunze
To:	Bj Kristiansen
Cc:	Muthu Kuchanur
Subject:	Brook Mine review/CHIA
Date:	Tuesday, November 18, 2014 4:26:54 PM

Hi BJ,

Thanks for your memo on the request for review on the Brook Mine application. I saw that the volumes have arrived here and have been stamped in. We are happy to assist in the review.

Due to our work on another CHIA, we likely won't be starting work on the Brook Mine CHIA until sometime early next year. However, I wanted to mention that there will be some items we would like to request from the applicant in advance that will help us write the CHIA. This might include things like baseline monitoring data in electronic format (CARF) and certain CAD files to assist us with maps.

I will take a look at the application soon to make a list of these items. Depending on your thoughts, I was thinking we could add these requests as comments for the review, but possibly send them early so we would not have to wait until the first round responses were received?

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

From: Thomas Sansonetti
To: andrew.kuhlmann@wyo.gov
Subject: Our meeting in Cheyenne re: RAMACO"s permit
Date: Monday, December 01, 2014 3:31:34 PM

Hi Andrew!

Hope you had a good Thanksgiving. I did my share of football watching and turkey eating!

Any chance we could have our previously discussed meeting prior to December 9? I hit the road for ten straight days starting December 10.

Thanks, Tom

Sent from my iPhone

From: andrew kuhlmann
To: Thomas Sansonetti
Subject: Re: Our meeting in Cheyenne re: RAMACO"s permit
Date: Tuesday, December 02, 2014 4:29:17 PM

Tom,

My Thanksgiving went well with a pretty similar story.

Sorry it took me a bit to make sure I was free to meet sometime before your trip. Would a meeting/call on the 8th work? Otherwise, I could make the Thursday the 4th, or the afternoon of Friday the 5th work too.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: RE: Our meeting in Cheyenne re: RAMACO"s permit
Date: Tuesday, December 02, 2014 6:03:55 PM

Great, let's do Friday afternoon. Should take about thirty minutes. How about 2:30 pm at your office? What floor are you on? Tom

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Tuesday, December 02, 2014 4:29 PM
To: Thomas Sansonetti
Subject: Re: Our meeting in Cheyenne re: RAMACO's permit

Tom,

My Thanksgiving went well with a pretty similar story.

Sorry it took me a bit to make sure I was free to meet sometime before your trip. Would a meeting/call on the 8th work? Otherwise, I could make the Thursday the 4th, or the afternoon of Friday the 5th work too.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: andrew kuhlmann
To: Thomas Sansonetti
Subject: Re: Our meeting in Cheyenne re: RAMACO"s permit
Date: Wednesday, December 03, 2014 7:42:31 AM

Tom,

Friday at 2:30 works great. I'm on the 2nd floor of the Pioneer Building.

See you then,

Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

From:	BJ Kristiansen
To:	andrew.kuhlmann@wyo.gov
Cc:	mark.rogaczewski@wyo.gov; Nancy Nuttbrock
Subject:	Brook Mining Co., LLC, surface owner issues
Date:	Wednesday, December 03, 2014 8:15:51 AM
Attachments:	image002.jpg

Andrew,

I am checking in with you to see if you have made any determinations yet about the Brook Mine surface use situation. One issue that may have a bearing in the determination is related to Bentonite mining in Johnson County. There are a number of Bentonite mines that use old patents and deeds to validate their use of the private surface to access their mining operations. In a few cases, these documents are used to allow surface disturbance on lands that are owned by another party that may be adversarial. They utilize the unrestricted access language of the old documents to justify their use of the privately owned acreage. I generally do not know much more than that but it may be worth investigating to see if there is any applicability to the current Brook Mine permit application surface use issues.

Have a nice day.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: andrew kuhlmann
To: Mark Rogaczewski; Bj Kristiansen
Subject: Brook Mining
Date: Friday, December 05, 2014 4:12:54 PM

Mark and BJ,

I had a good meeting this afternoon with Ramaco/Brook Mining's attorney. He gave me an update on where they think they're at in discussions with Ambre and Padlock Ranch, so I thought I'd pass the info along to you guys when you have a chance to talk next week.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	andrew kuhlmann
Cc:	mark.rogaczewski@wyo.gov
Subject:	RE: Brook Mining
Date:	Monday, December 08, 2014 9:21:53 AM

Andrew,

Mark and I are both available at the same time on Tuesday, noon time frame. Could we do a phone call from 12:30 to 1:30 tomorrow afternoon? Mark is really busy this week so we have to squeeze things into his schedule since he will be gone from Wednesday on.

-bj

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Friday, December 05, 2014 4:12 PM
To: Mark Rogaczewski; Bj Kristiansen
Subject: Brook Mining

Mark and BJ,

I had a good meeting this afternoon with Ramaco/Brook Mining's attorney. He gave me an update on where they think they're at in discussions with Ambre and Padlock Ranch, so I thought I'd pass the info along to you guys when you have a chance to talk next week.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	andrew kuhlmann
To:	BJ Kristiansen
Cc:	Mark Rogaczewski
Subject:	Re: Brook Mining
Date:	Monday, December 08, 2014 2:42:02 PM

BJ,

12:30-1:30 tomorrow works fine for me. I don't think we'll need to talk long. I just wanted to pass along some quick info about the neighboring landowners. Nothing pressing.

In fact, if it would be easier for both of you, it might even be stuff that I could pass along to you over the phone and you could relay on to Mark later. If that's the case, feel free to give me a call. I'm pretty free this afternoon and tomorrow morning.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	andrew kuhlmann
Subject:	RE: Brook Mining
Date:	Monday, December 08, 2014 3:58:10 PM

Andrew,

Let's stay with 12:30 since it works the best.

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Monday, December 08, 2014 2:40 PM
To: BJ Kristiansen
Cc: Mark Rogaczewski
Subject: Re: Brook Mining

BJ,

12:30-1:30 tomorrow works fine for me. I don't think we'll need to talk long. I just wanted to pass along some quick info about the neighboring landowners. Nothing pressing.

In fact, if it would be easier for both of you, it might even be stuff that I could pass along to you over the phone and you could relay on to Mark later. If that's the case, feel free to give me a call. I'm pretty free this afternoon and tomorrow morning.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	andrew kuhlmann
To:	BJ Kristiansen
Subject:	Re: Brook Mining
Date:	Monday, December 08, 2014 5:07:36 PM

Sounds good.

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	andrew kuhlmann
Cc:	mark.rogaczewski@wyo.gov
Subject:	Brook Mining Co. Issue with Form 8 vs. Deeded surface rights.
Date:	Monday, January 05, 2015 12:43:19 PM
Attachments:	image001.jpg

Andrew,

I wondered how your examination of the Brook Mine (RAMACO) Deeds replacing Form 8 was going? Now that the new year has begun, perhaps you may have better luck pinning this one down.

Just a friendly inquiry from:

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	andrew kuhlmann
To:	BJ Kristiansen
Cc:	Mark Rogaczewski
Subject:	Re: Brook Mining Co. Issue with Form 8 vs. Deeded surface rights.
Date:	Wednesday, January 07, 2015 8:58:46 AM

BJ,

Thanks for checking. I'm still working on it and trying to stay on the timeline I discussed with you and Mark.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	andrew kuhlmann
Cc:	mark.rogaczewski@wyo.gov
Subject:	RE: Brook Mining Co. Issue with Form 8 vs. Deeded surface rights.
Date:	Wednesday, January 07, 2015 10:08:42 AM

Thank you Andrew. We appreciate your efforts on our behalf.

-bj

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Wednesday, January 07, 2015 8:58 AM
To: BJ Kristiansen
Cc: Mark Rogaczewski
Subject: Re: Brook Mining Co. Issue with Form 8 vs. Deeded surface rights.

BJ,

Thanks for checking. I'm still working on it and trying to stay on the timeline I discussed with you and Mark.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: andrew kuhlmann
Cc: BJ Kristiansen
Subject: Re: Brook Mining Co. Issue with Form 8 vs. Deeded surface rights.
Date: Wednesday, January 07, 2015 10:38:06 AM

Thanks for the update.

On Wed, Jan 7, 2015 at 8:58 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> BJ,
>
> Thanks for checking. I'm still working on it and trying to stay on the timeline I discussed with you and Mark.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: andrew kuhlmann
Cc: mark.rogaczewski@wyo.gov; Alan Edwards
Subject: Brook Mine Surface owner consent, Deed review
Date: Friday, January 30, 2015 11:02:47 AM
Attachments: image003.jpg

Andrew,

Mark Rogaczewski received a phone call this morning from Jordan Sweeny of Ambre Energy. Jordan was inquiring about the status of our investigation into the suitability of the Deeds RAMACO provided in the Brook Mine permit application as permission to use the surface. Their concern appears to be with the location of the railroad loop proposed for the Brook Mine. It will be built within Ambre's permit on property owned by Ambre. RAMACO is asserting, through the deed, that they have the authority to build the railroad loop on Ambre's surface. We allow permits to overlap where there is a legitimate reason to do so. Jordan wanted to know where we were in the process of determining the acceptability of the deed instrument to allow construction of the loop. Ambre's contention is that a railroad loop will harm their ability to develop their property and will prevent them from accessing the railroad themselves. Mark told them that we are working on the determination of surface use approval through your office.

So, how is it going? Do you have any sense of a timeline for the determination? Let me know when you have a framework of reference we can use to respond to Ambre.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: Bj Kristiansen; David Myers
Subject: Brook Mine permit application - Appendix D11 -AVF
Date: Friday, February 06, 2015 9:54:16 AM

Bj and David,

I was wondering if you have reviewed Appendix D11 of the Brook Mine permit application yet. I realize I was not asked to look at Appendix D11 as part of the permit review, but since AVFs are a component of the CHIA and can potentially have a material damage component, I have looked at this section and have several possible comments. However, I do not want to overstep your review and also do not want to conflict with what was previously discussed with the applicant.

When you have finished your review of D11, I suggest we have a call to discuss some of the things I have noted and also compare thoughts.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Brook Mine permit application - Appendix D11 -AVF
Date: Monday, February 09, 2015 10:37:07 AM

Matt,.

I appreciate you taking the time to look over the AVF section of the Brook Mine application. I would have asked you to look at it anyway as I would like all of us to review the application and bring our individual expertise to the process. I'll be in touch after I finish my critique of App. D11.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Friday, February 06, 2015 9:54 AM
To: Bj Kristiansen; David Myers
Subject: Brook Mine permit application - Appendix D11 -AVF

Bj and David,

I was wondering if you have reviewed Appendix D11 of the Brook Mine permit application yet. I realize I was not asked to look at Appendix D11 as part of the permit review, but since AVFs are a component of the CHIA and can potentially have a material damage component, I have looked at this section and have several possible comments. However, I do not want to overstep your review and also do not want to conflict with what was previously discussed with the applicant.

When you have finished your review of D11, I suggest we have a call to discuss some of the things I have noted and also compare thoughts.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen; David Myers
Subject: Re: Brook Mine permit application - Appendix D11 -AVF
Date: Monday, February 09, 2015 10:55:17 AM

Ok, sounds good Bj. I will keep a list of my comments but not send these on until we have a chance to discuss after you are done with your review.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Mon, Feb 9, 2015 at 10:39 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,.
>
> I appreciate you taking the time to look over the AVF section of the Brook Mine application. I would have asked you to look at it anyway as I would like all of us to review the application and bring our individual expertise to the process. I'll be in touch after I finish my critique of App. D11.
>
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Friday, February 06, 2015 9:54 AM
> **To:** Bj Kristiansen; David Myers
> **Subject:** Brook Mine permit application - Appendix D11 -AVF
>
> Bj and David,
>
> I was wondering if you have reviewed Appendix D11 of the Brook Mine permit application yet. I realize I was not asked to look at Appendix D11 as part of the permit review, but since AVFs are a component of the CHIA and can potentially have a material damage component, I have looked at this section and have

several possible comments. However, I do not want to overstep your review and also do not want to conflict with what was previously discussed with the applicant.

When you have finished your review of D11, I suggest we have a call to discuss some of the things I have noted and also compare thoughts.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	David Myers
To:	Matthew Kunze
Cc:	BJ Kristiansen
Subject:	Re: Brook Mine permit application - Appendix D11 -AVF
Date:	Tuesday, February 10, 2015 8:41:24 AM

Matt and BJ.

It's now on the top of my pile but I haven't even looked at it yet.

I'll be into it next week.

Thanks,

Dave

David J. Myers
Natural Resources Analyst
WDEQ / LQD District III
2100 West 5th St.
Sheridan, WY 82801
(307) 675-5614

On Mon, Feb 9, 2015 at 10:54 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Ok, sounds good Bj. I will keep a list of my comments but not send these on until we have a chance to discuss after you are done with your review.
>
> Matt
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Mon, Feb 9, 2015 at 10:39 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
>> Matt,.
>>
>> I appreciate you taking the time to look over the AVF section of the Brook Mine application. I would have asked you to look at it anyway as I would like all of us to review the application and bring our individual expertise to the process. I'll be in touch after I finish my critique of App. D11.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Friday, February 06, 2015 9:54 AM
To: Bj Kristiansen; David Myers
Subject: Brook Mine permit application - Appendix D11 -AVF

Bj and David,

I was wondering if you have reviewed Appendix D11 of the Brook Mine permit application yet. I realize I was not asked to look at Appendix D11 as part of the permit review, but since AVFs are a component of the CHIA and can potentially have a material damage component, I have looked at this section and have several possible comments. However, I do not want to overstep your review and also do not want to conflict with what was previously discussed with the applicant.

When you have finished your review of D11, I suggest we have a call to discuss some of the things I have noted and also compare thoughts.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	andrew kuhlmann
Cc:	mark.rogaczewski@wyo.gov; Alan Edwards
Subject:	Brook Mine permit application, TFN 6 2/025
Date:	Monday, February 23, 2015 12:19:33 PM
Attachments:	image001.jpg

Andrew,

Just a quick query as to where you are with the surface use issue arising from the Brook Mine permit application? Let me know where you are at whenever you can get to it.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Mark Rogaczewski; andrew kuhlmann
Subject:	Big Horn Coal
Date:	Wednesday, February 25, 2015 8:12:12 AM

An attorney representing Big Horn Coal, Lynn Boomgarden, called me yesterday about the Ramaco CN. She had a couple of questions that I couldn't answer. I would like for us to get together at 1:30 on the phone to discuss it (I will call you Mark) for a few minutes than we can conference Lynn into the conversation. If the attorneys are involved I want to make sure that I have the facts correct.

Andrew - could you come to my office for the call. We could cover a couple of other things when we are done.

Thanks. Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
Office: 307-777-7062
Alan.Edwards@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Alan Edwards
Cc: andrew kuhlmann
Subject: Re: Big Horn Coal
Date: Wednesday, February 25, 2015 9:40:37 AM

Alan,

I have a meeting with a bentonite operator from 1:30 - 3 p.m. My schedule is open from 12:30 - 1:30 if needed. If you wish for me to cancel the bentonite meeting, please let me know and I will contact the bentonite operator.

Thanks,
Mark

On Wed, Feb 25, 2015 at 8:12 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> An attorney representing Big Horn Coal, Lynn Boomgarden, called me yesterday about the Ramaco CN. She had a couple of questions that I couldn't answer. I would like for us to get together at 1:30 on the phone to discuss it (I will call you Mark) for a few minutes than we can conference Lynn into the conversation. If the attorneys are involved I want to make sure that I have the facts correct.
>
> Andrew - could you come to my office for the call. We could cover a couple of other things when we are done.
>
> Thanks. Alan
>
> --
> Alan Edwards
> Deputy Director
> Administrator, Abandoned Mine Lands
> Office: 307-777-7062
> Alan.Edwards@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Alan Edwards
To: Mark Rogaczewski
Cc: andrew kuhlmann
Subject: Re: Big Horn Coal
Date: Wednesday, February 25, 2015 10:46:22 AM

Andrew, are you available at 1:00?

Sent from my iPhone

On Feb 25, 2015, at 9:40 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan,
>
> I have a meeting with a bentonite operator from 1:30 - 3 p.m. My schedule is open from 12:30 - 1:30 if needed. If you wish for me to cancel the bentonite meeting, please let me know and I will contact the bentonite operator.
>
> Thanks,
> Mark
>
> On Wed, Feb 25, 2015 at 8:12 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>
>> An attorney representing Big Horn Coal, Lynn Boomgarden, called me yesterday about the Ramaco CN. She had a couple of questions that I couldn't answer. I would like for us to get together at 1:30 on the phone to discuss it (I will call you Mark) for a few minutes than we can conference Lynn into the conversation. If the attorneys are involved I want to make sure that I have the facts correct.
>>
>> Andrew - could you come to my office for the call. We could cover a couple of other things when we are done.
>>
>> Thanks. Alan
>>
>> --
>> Alan Edwards
>> Deputy Director
>> Administrator, Abandoned Mine Lands
>> Office: 307-777-7062
>> Alan.Edwards@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	andrew kuhlmann; Alan Edwards
Subject:	Attorney Client Privilege
Date:	Wednesday, February 25, 2015 12:40:47 PM
Attachments:	RAMACO 1954 Deed.pdf

Alan and Andrew,

Please see attached a scanned copy of a portion of the RAMACO deed. Based on the language in this portion of the deed, RAMACO has stated they do not need surface owner consent from Ambre Energy to perform mining related activities on lands owned by Ambre Energy that overlie coal owned by RAMACO. I don't know if we will need this for our call this afternoon or discussions with Ms. Lynn Boomgarden but I wanted to send so you had a copy.

Thanks,

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Together with all such surface water and ditch rights as Grantor may have in the foregoing;

But subject as to all of the foregoing to all existing grazing and other surface leases made by Grantor as Lessor, and the right of all tenants and lessees to remove buildings and other improvements placed on said leased premises by them;

And subject further, to one-half of the taxes for 1954 and all taxes for subsequent years;

And subject further, to all existing rights-of-way and easements in favor of third persons over and across the above described lands, including without limitation all streets and highways, County, State and Federal, and telephone and electric power transmission lines;

The Grantor reserving unto itself, its successors and assigns all gas, oil, coal and other minerals contained in all of the above described lands, together with the right to mine, explore, drill, extract and remove the same, and including the right to use so much of the surface of said lands as may be necessary or convenient in order to enable the Grantor, its successors and assigns to mine, explore, drill, extract and remove said oil, gas, coal and other minerals. And in the event that the Grantor, its successors or assigns, shall hereafter mine, drill, explore, extract and remove gas, oil, coal or other minerals and shall utilize any part of the surface of said lands in connection therewith, they shall be free from any liability or claim for damage to the surface of said lands that might be asserted by the Grantee, its successors and assigns, on account of subsidence or other injury to the surface of said lands resulting from such operations, except that in case of any such injury Grantor will pay such actual damage as the parties shall agree has been so caused to any said lands, or in default of such agreement, as shall be determined by arbitration to have been so caused; provided however, that in no event shall Grantor, its successors or assigns, be obliged to pay for such damage more than Ten Dollars ($10.00) per acre for any of said lands damaged which are dry grazing lands, Fifty Dollars ($50.00) per acre for any said lands damaged which are bottom lands, and Two Hundred Dollars ($200.00) per acre for any of said lands damaged which are irrigated lands.

IN WITNESS WHEREOF, the Grantor has caused its corporate seal to be hereunto affixed, and these presents to be signed by its duly authorized officer, the day and year first above written.

(SEAL)

ATTEST:

SHERIDAN-WYOMING COAL COMPANY, Inc.

By _____

President

From: David Myers
To: matthew.kunze@wyo.gov; Bj Kristiansen; David Myers
Subject: Invitation: Brook MIne Call / AVF / Surface Water Review @ Thu Mar 12, 2015 1pm - 2pm (Matthew Kunze)
Date: Tuesday, March 03, 2015 10:43:39 AM
Attachments: invite.ics

Brook MIne Call / AVF / Surface Water Review

more details »

When Thu Mar 12, 2015 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/david

Calendar Matthew Kunze

Who
- David Myers - organizer
- Bj Kristiansen
- Matthew Kunze

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for invitations on calendar Matthew Kunze.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_76.ics (1201 Bytes) cannot be converted to PDF format.

From: Matthew Kunze
To: david.myers@wyo.gov; Matthew Kunze
Subject: Accepted: Brook MIne Call / AVF / Surface Water Review @ Thu Mar 12, 2015 1pm - 2pm (David Myers)
Date: Tuesday, March 03, 2015 10:43:54 AM
Attachments: invite.ics

Matthew Kunze has accepted this invitation.

Brook MIne Call / AVF / Surface Water Review

When Thu Mar 12, 2015 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/david

Calendar David Myers

Who
- David Myers - organizer
- Bj Kristiansen
- Matthew Kunze

Invitation from Google Calendar

You are receiving this email at the account david.myers@wyo.gov because you are subscribed for invitation replies on calendar David Myers.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_77.ics (641 Bytes) cannot be converted to PDF format.

From: David Myers
To: Bj Kristiansen
Cc: Matthew Kunze
Subject: Call with Matt Re: Surface Water and AVFs Brook Mine
Date: Tuesday, March 03, 2015 10:45:33 AM

Hi BJ,

Matt is at this OSM training with me and we would like to discuss our brook mine comments after I get mine completed. That's what that invite is about. Thanks,

Dave

David J. Myers
Natural Resources Analyst
WDEQ / LQD District III
2100 West 5th St.
Sheridan, WY 82801
(307) 675-5614

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	David Myers
Subject:	RE: Call with Matt Re: Surface Water and AVFs Brook Mine
Date:	Tuesday, March 03, 2015 11:13:15 AM

Okie-dokie

From: David Myers [mailto:david.myers@wyo.gov]
Sent: Tuesday, March 03, 2015 10:46 AM
To: Bj Kristiansen
Cc: Matthew Kunze
Subject: Call with Matt Re: Surface Water and AVFs Brook Mine

Hi BJ,

Matt is at this OSM training with me and we would like to discuss our brook mine comments after I get mine completed. That's what that invite is about. Thanks,

Dave

David J. Myers
Natural Resources Analyst
WDEQ / LQD District III
2100 West 5th St.
Sheridan, WY 82801
(307) 675-5614

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	andrew kuhlmann
Cc:	mark.rogaczewski@wyo.gov
Subject:	Brook Mine surface use, Attorney/client privilege
Date:	Wednesday, March 04, 2015 9:32:45 AM
Attachments:	image002.jpg

Andrew,

We are having increasing tensions here with RAMACO and Ambre in confrontational incidents. You probably heard about the sheriff involvement on the 20th of February when RAMACO was trying to complete their exploration program on Ambre property. In addition, a representative from Padlock met with me last week to discuss their issues with RAMACO. They have been offered cash for their holdings and the offer was rejected instantly. Apparently RAMACO offered pennies on the dollar for Padlock's interests. The deed from 1954 is very specific about access to Big Horn Coal property and RAMACO is using it now to push their exploration in all directions. They are operating under our Coal Notification exploration permit which does not require surface owner consent. Given these issues, where are you with your analysis?

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Matthew Kunze; Matthew Kunze
Subject: Notification: Catch Up/Brook Mine items @ Mon Mar 9, 2015 1pm - 2pm (matthew.kunze@wyo.gov)
Date: Monday, March 09, 2015 12:45:16 PM

Catch Up/Brook Mine items

more details »

When Mon Mar 9, 2015 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/matthew

Calendar matthew.kunze@wyo.gov

Who
- Matthew Kunze - organizer

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for notifications on calendar matthew.kunze@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From: Matthew Kunze
To: muthu.kuchanur@wyo.gov; Matthew Kunze
Subject: Invitation: Catch Up/Brook Mine items @ Mon Mar 9, 2015 1pm - 2pm (Muthu Kuchanur)
Date: Monday, March 09, 2015 12:45:43 PM
Attachments: invite.ics

Catch Up/Brook Mine items

more details »

When Mon Mar 9, 2015 1pm – 2pm Mountain Time

Where Hydro Library (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/matthew

Calendar Muthu Kuchanur

Who
- Matthew Kunze - organizer
- Muthu Kuchanur

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account muthu.kuchanur@wyo.gov because you are subscribed for invitations on calendar Muthu Kuchanur.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_78.ics (1063 Bytes) cannot be converted to PDF format.

From: Muthu Kuchanur
To: matthew.kunze@wyo.gov; Muthu Kuchanur
Subject: Accepted: Catch Up/Brook Mine items @ Mon Mar 9, 2015 1pm - 2pm (Matthew Kunze)
Date: Monday, March 09, 2015 12:47:29 PM
Attachments: invite.ics

Muthu Kuchanur has accepted this invitation.

Catch Up/Brook Mine items

When Mon Mar 9, 2015 1pm – 2pm Mountain Time

Where Hydro Library (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/matthew

Calendar Matthew Kunze

Who
- Matthew Kunze - organizer
- Muthu Kuchanur

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for invitation replies on calendar Matthew Kunze.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_79.ics (641 Bytes) cannot be converted to PDF format.

From: Google Calendar
To: Muthu Kuchanur; Matthew Kunze
Subject: Notification: Catch Up/Brook Mine items @ Mon Mar 9, 2015 1pm - 2pm (Muthu Kuchanur)
Date: Monday, March 09, 2015 12:50:15 PM

Catch Up/Brook Mine items

more details »

When Mon Mar 9, 2015 1pm – 2pm Mountain Time

Where Hydro Library (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/matthew

Calendar Muthu Kuchanur

Who
- Matthew Kunze - organizer
- Muthu Kuchanur

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account muthu.kuchanur@wyo.gov because you are subscribed for notifications on calendar Muthu Kuchanur.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From:	Matthew Kunze
To:	Bj Kristiansen
Subject:	First Round Surface Water Comments - Brook Mine Permit Application - TFN 6 2/025
Date:	Tuesday, March 10, 2015 8:47:46 AM
Attachments:	MDK_First Round Surface Water Comments on Brook Mine New Permit Application_TFN 6 2-025.docx

---

Bj,

Please find my attached surface water review, as requested by your November 13, 2014 memo.

I will send the AVF comments in a separate memo after we have talked Thursday.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Matt Kunze, LQD Division Services

DATE: March 10, 2015

SUBJECT: First Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

As requested by your November 13, 2014 memorandum, I have performed a review of surface water items in the new Brook Mine permit application (TFN 6 2/025). I have reviewed Appendix D6 (Hydrology), Mine Plan, and Reclamation Plan. I have one comment for Appendix D10 (Wetlands). I also have some comments that were generated in advance of preparing the Cumulative Hydrologic Impact Assessment (CHIA) for the permitting action.

Comments on Appendix D11 (AVFs) will be sent separately.

Items Requested in Electronic Format for Preparation of CHIA

1. Please provide a CAD or ArcGIS shapefile that contains the proposed permit boundary for the Brook Mine. This file will be used to prepare maps in the CHIA. This file can be emailed to: matthew.kunze@wyo.gov. (MDK)

2. Please provide the baseline surface and groundwater data collected to support baseline characterization for the permit application. All data can be submitted on Excel templates (Attachments) found on the LQD website for the Coal Annual Report Format (CARF): http://deq.wyoming.gov/lqd/coal/resources/annual-report-3/.

    - Please provide all surface water flow and water quality data for the following surface water stations: SM578415-SW-1, SM578409-SW-1, SM578418-SW-1, and SM578512-SW-1.

    - Please provide all groundwater level and water quality data for all Brook Mine monitoring wells shown in Table D6.2-1.

Appendix D6-Hydrology

Section D6.1.2 Drainage Basin Description

3. On Page D6-2 it is stated that Slater Creek is an ephemeral stream. Aerial imagery shows a riparian area with trees and subirrigation occurring along much of the channel. PEM wetlands are also present as documented in Appendix D10. It would seem that an ephemeral stream may not be able to support these features. Please provide the justification why Slater Creek is considered an ephemeral stream, and that the stream does not contain intermittent characteristics where it is not below the local water table for a portion of the year. (MDK)

Section D6.1.3.2 Flood Studies

4. The USGS operated a peak flow gage on Slater Creek from 1967 to 1981 (Station No. 06299900, http://nwis.waterdata.usgs.gov/wy/nwis/inventory/?site_no=06299900&agency_cd=USGS). The gage was located just downstream of the proposed permit boundary near the confluence with the Tongue River. Please incorporate the annual peak flow data from this station into the permit application to illustrate the range of peak flows that might be expected from Slater Creek. (MDK)

5. Some of the U.S. Army Corps of Engineers references cited in the text (2000, 2001) do not appear in the References Section (Section D6.3). Please add these to the references list. (MDK)

6. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section D6.3. (MDK)

7. Please explain in the text if the existing impoundments (stock reservoirs, old mine pits, etc.) in both the Slater Creek and Hidden Water Creek drainages were considered in the routing functions for the HEC-HMS runoff estimates. These features would likely have an effect on attenuating peak flows. (MDK)

8. As the text states on Page D6-5, the HEC-HMS runoff estimates in Table D6.1-7 are higher than the Miller (2003) equation estimates. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) equation estimates.

   The Miller (2003) equation for this region used, in part, data from the USGS peak flow gage on Slater Creek, so it would seem that the Miller (2003) estimates may be more reasonable. For example, compared to the HEC-HMS estimates, the 15-year record from the peak flow gage on Slater Creek would not register at anything greater than a five-year event. Furthermore, the May 18, 1978 event on Slater Creek resulted in a peak flow of 1,100 cfs, which according to the HEC-HMS estimates would only be around a 2-year event. USGS studies have shown that the May 1978 flood event was estimated to be a 100-year event on some parts of the Tongue River in this area (http://pubs.usgs.gov/pp/1244/report.pdf). (MDK)

Section D6.1.5.1 Monitoring Stations

9. Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

10. On Page D6-8, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

11. On Page D6-8, second paragraph, it states that increased *E.Coli* from samples collected in 2006 were attributable to high flows in May-June 2010. Were the samples also collected in 2010 and not 2006? Please revise this sentence. (MDK)

12. On Page D6-8, second paragraph, it would be informative to add that, in addition to the SCCD, other entities such as the Big Horn Mine, USGS, and WDEQ/WQD have collected water quality data on the Tongue River and Goose Creek near the proposed mine. It may also be informative to mention that sections of the Tongue River in the vicinity of the proposed mine are on the State's 303(d) list since certain uses are not supported due to impaired water quality. Goose Creek has also been on the 303(d) list in the past and a TMDL has been prepared. Information can be found at: http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/ and http://deq.wyoming.gov/wqd/tmdl/. (MDK)

Section D6.1.5.2 Surface Water Quantity

13. The Big Horn Mine (WDEQ/LQD Permit 213) operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. This station was located approximately ¼ mile upstream from station SM578415-SW-1 that was installed by the Brook Mine. The LQD Hydrology Database contains mean daily flow data from this station from 1982 to 1997, although several years are missing data. Baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request or a more complete dataset may be available if requested from the Big Horn Mine. (MDK)

Section D6.1.5.3 Surface Water Quality

14. Please briefly discuss in the text the water quality results from Slater Creek in the context of WQD Surface Water Quality Standards for Class 3B waters (see Chapter 1 of WQD Rules and Regulations). This would reveal whether or not designated uses were being met prior to mining. The two samples from Slater Creek indicate no exceedences of Class 3B criteria, indicating uses are supported. (MDK)

15. It is understood that water was not flowing in Hidden Water Creek so the applicant could not collect a sample for baseline purposes. However, as previously mentioned, the Big Horn Mine operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. The LQD Hydrology Database contains nine water quality samples collected at this site from 1979 to 1989. Baseline characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request. (MDK)

Section D6.1.5.4 Sediment Transport

16. This section would be enhanced by including data from a single sediment sample collected on Slater Creek at USGS Station No. 06299900 (peak flow gage previously discussed in Comment No. 4). This sample was collected in June 1967 at a flow of 18 cfs. The TSS was 11,600 mg/L and the suspended sediment discharge was 564 tons/day. (MDK)

Addendum D6-5 – Rating Curves

17. A rating curve developed using only the Manning equation will provide only a rough estimate of flows given the uncertainty in the Manning's roughness coefficient. It is recommended that direct discharge measurements also be taken over time to help evaluate the rating curves developed for the four monitoring sites. (MDK)

18. Given the uncertainty in the Manning equation, the estimated flow rates provided in Table D6-3 and Attachment D6-5-A (Rating Tables) are reported at much too high a level of precision to be meaningful. Depending on the magnitude of the flow estimate, there should be only one or two significant figures provided. For example, 0.29 cfs = 0.3 cfs and 3,584.38 cfs = 3,600 cfs. Please revise these tables. (MDK)

<u>Appendix D10-Wetlands</u>

Section D10.2 Results

19. The text may want to state when (what date) RAMACO requested the jurisdictional determination from the USACE, and include this request letter as an Addendum to Appendix D10. This would provide documentation that the request was submitted, as receipt of the USACE determination may lag behind the LQD permitting process. (MDK)

<u>Mine Plan</u>

Section MP.4.1 Mining Sequence

20. On Exhibit MP.4-1, please attempt to show the areas that would be highwall mined versus surface mined. These layers are currently not found until Exhibit MP.15-1. Alternatively, the text in this Section could specify that the areas to be highwall versus surface mined are shown in Exhibit MP.15-1. (MDK)

Section MP.5.1 Surface Drainage and Erosion Plan

21. Only Slater Creek and Hidden Water Creek are labeled and shown in Exhibit MP.5-1. In order to better evaluate the Hydrologic Control Plan, please provide labels and locations for the other stream channels, including Tongue River, Goose Creek, East Fork Earley Creek, and the other unnamed channels (as shown on the USGS 24K Quad) on the proposed permit area. (MDK)

22. Exhibit MP.5-1 shows overburden stockpiles OB-13 and OB-12, as well as topsoil stockpile TS-6, occurring directly over the Slater Creek channel. The Exhibit does not show any diversion ditches to be used in these locations. Please either move the location of the stockpiles or present a plan to use a diversion to route Slater Creek around the stockpiles. (MDK)

Section MP.5.2 Sedimentation and Wastewater Impoundments

23. Exhibit MP.5-1 shows the locations of two "sediment basins". Are these considered the same as "sedimentation impoundments", as discussed in this Section? If so, the designs for these two impoundments are not found within the Mine Plan. (MDK)

Section MP.5.3 Flood Control

24. This section discusses flood control reservoirs but it is not mentioned how many flood control reservoirs would be constructed and where their locations would be. Please provide this information to comply with LQD Coal Rules and Regulations, Chapter 2, Section 5(a)(i)(D)(IV). (MDK)

Section MP.5.4 Diversions

25. This section mentions permanent diversions, but there are no apparent plans for permanent diversions. Please discuss if permanent diversions are anticipated as part of the mining operation, or if all diversions will be temporary. (MDK)

26. Exhibit MP.5-1 shows only one diversion ditch for Hidden Water Creek in T57N, R84W, Section 9. Please discuss this particular diversion and its typical design in more detail in Section MP.5.4. (MDK)

Section MP.5.5 Culverts

27. Please provide a brief statement that commits to a periodic culvert inspection and maintenance plan to ensure that culverts will function properly over time. (MDK)

Section MP.5.8 Mine Pit Dewatering Plan

28. The first sentence references a sedimentation reservoir. Where is the location of this sedimentation reservoir? Are these the "sediment basins" shown in Exhibit MP.5-1? If not these sedimentation reservoirs need to be added to this Exhibit. (MDK)

29. The first paragraph references treating and discharging pit water. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Section MP.6.1 Surface Water

30. Exhibit MP.1-1 shows surface disturbance directly over a few areas of Slater Creek and Hidden Water Creek. Please identify the source of disturbance in these areas. Direct disturbance of the channel should be avoided unless there is a plan for a diversion to route the stream around the disturbance. (MDK)

31. The mining trenches are often discussed with reference to Exhibit MP.1-1. However, the trenches are not shown on this Exhibit. Please add the locations of the trenches to Exhibit MP.1-1. (MDK)

32. On Page MP-39, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining disturbance will be treated prior to discharge. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

33. Please discuss the diversion ditch for Hidden Water Creek in the first carryover paragraph on Page MP-39. (MDK)

34. On Page MP-40, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining activities will be treated prior to discharge. Please reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

35. On Page MP-40, there is a sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility". This statement is unclear. Are the impacts to the actual Slater Creek channel or the uplands and other tributaries in the watershed? Is it *reduced* ground cover and *increased* soil erodiblity? Please provide a more explicit description of the possible impacts. (MDK)

36. Please provide a discussion on whether the proposed mining operation would affect surface water quality such that designated uses would be affected on the major streams on and adjacent to the proposed permit area. (MDK)

37. The text describes possible reductions in peak flows and storm volumes. Please describe in the PHC if the proposed mining operation will have any effects on nearby or downstream surface water rights. (MDK)

38. Please add a brief statement to the PHC that if it is determined that the mining operation affects a surface water right, that water right would be replaced with a water source of similar quantity and quality as provided by W.S. § 35-11-415(b)(xii). (MDK)

Section MP.6.1.1 Land Erosion Stability

39. It is unclear the intent of this section. It seems to be out of place in the mine plan, as it discusses the USLE in the context of only native and reclaimed conditions. Furthermore, no data other than the K factors are presented in Mine Plan Tables (Table MP.6.1). The Reclamation Plan also does not discuss applying the USLE, so it would seem that Section MP.6.1.1 should be removed unless a USLE analysis is completed of pre- vs during- vs postmine erosion predictions. (MDK)

Section MP.7.1 Surface Water Monitoring

40. It is unclear why reservoirs will be monitored in the operational monitoring program when these features were not sampled for during baseline characterization. If the reservoirs have the potential to be affected by the mining operation they should be sampled prior to mining with this information presented in Appendix D6. (MDK)

41. Please add the reservoir monitoring locations listed in Table MP.7-1 to Exhibit MP.7.1. (MDK)

42. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

43. Please identify what type of water quantity data will be generated from the continuous stage monitoring. For example, will mean daily flow rates and/or peak daily flow rates be estimated, as these would likely be submitted to the LQD in the Annual Report? (MDK)

44. The text in the last paragraph on Page MP-45 states that water quality samples will be collected from a single station using an ISCO automatic sampler. Please identify in the text which station this is. Also, please explain the rationale for using an ISCO sampler at only one of the four stream monitoring sites. (MDK)

45. The text in the first paragraph on Page MP-46 states that data will be evaluated to determine if any surface water and groundwater interactions exist. It would seem that any interactions should have already been identified during the baseline characterization of the hydrological system on and near the proposed permit area. It does not appear that the permit application discusses surface/groundwater interactions. (MDK)

Section MP.8 Water Use

46. Please state in the text that all water from surface reservoirs or wells will be used under appropriate permits from the State Engineer's Office (SEO). (MDK)

47. It is advised that the applicant discuss with the SEO-Interstate Streams Division any implications that water use may have under the Yellowstone River Compact. (MDK)

<u>Addendum MP-6 Subsidence Control Plan</u>

Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation

48. The text states that subsidence monitoring would be discontinued if no evidence of subsidence occurred after six months after highwall mining. Please include a clarifying statement that the applicant would remediate subsidence up until bond release is approved, even if the subsidence was detected later than the six months of initial monitoring. (MDK)

<u>Reclamation Plan</u>

Section RP.3.3 Postmine Slope Analysis

49. Please provide a discussion that compares the pre-mine vs. post-mine slope characteristics. A table would be helpful that compared the minimum, maximum, and average slopes under pre-mine and post-mine conditions. (MDK)

Section RP.3.5 Drainage Reestablishment

50. It is stated that mining will disturb portions of the Slater Creek channel and the reclamation will entail reconstruction. However, the Mine Plan PHC (Section MP.6.1) stated that Slater Creek "will still flow naturally around the trench", and "Because Slater Creek's flow will not come into contact with mining activities, no impact will be made to water quality". Please provide a clear and explicit description of the extent of direct disturbance to the Slater Creek channel. This description should be consistent between the Mine Plan and Reclamation Plan. (MDK)

Section RP.4.2 Mitigation of Unsuitable Material

51. Minor channels are defined as ephemeral streams but there is no definition provided for "major channels". Please provide a definition and also illustrate an example of a major channel within the proposed permit boundary that would fit into this category. (MDK)

Section RP.5.6 Erosion Control and Conservation Practices

52. The first sentence of the second paragraph…"Rills and gullies…" needs revised, as it appears to be missing one or more words. (MDK)

Section RP.7.4 Aquatic Habitat

53. The second sentence discusses stockponds possibly being disturbed by mining activities. The Mine Plan PHC did not mention that any existing stockponds would be disturbed by mining activities. If stockponds are to be disturbed by the mining operation, this should be discussed in the Mine Plan PHC. (MDK)

54. The text states that two additional postmine impoundments will be constructed and their location is shown in Exhibit RP.3-1. This Exhibit shows <u>ten</u> permanent impoundments, both on and adjacent to the proposed permit area. Please revise this discrepancy in the text or change the symbology in the Exhibit to clearly show the two permanent post-mine impoundments. (MDK)

Section RP.8.1 Drainage Basin Reconstruction

55. Please add the major stream name labels (Tongue River, Goose Creek, East Fork Earley Creek, Slater Creek, Hidden Water Creek) to Exhibit RP.8-1. (MDK)

56. Please explain in the text how the postmine drainage basin parameters in Table RP.8-1 were determined. (MDK)

57. The text states that a comparison of drainage basin parameters in Table RP.8-1 and Exhibit RP.8-1 show that the overall hydrologic balance will remain largely unchanged. This conclusion is not obvious from the Table and Exhibit. How similar are the postmine drainage basin parameters to the pre-mine parameters? Which sub-drainages show the largest change from pre-mine conditions? The text needs to include a more thorough discussion to demonstrate to the reader why exactly the postmine hydrologic balance will be unchanged. (MDK)

Section RP.8.1.1 Discharge Estimates

58. The text provides no discussion of the comparison between the pre-mine and postmine modelled discharge values. Please provide this discussion so the reader can determine if the differences are minor or major. (MDK)

59. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section RP.17. (MDK)

60. Similar to Comment No. 8 made for Appendix D6, the HEC-HMS runoff estimates in Table RP.8.4 are much higher than the Miller (2003) equations. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) regression equations.

Section RP.8.1.2 Channel/Floodplain Design

61. The last sentence in the first paragraph states that stream reaches for which designed cross sections are provided are identified in plan on Exhibit RP.8-1. There is nothing on this Exhibit that shows which stream reaches have designed cross sections, nor which stream channels are being reconstructed. Please clearly identify this information on this Exhibit. (MDK)

62. Exhibit RP.8-2 shows that the main Slater Creek channel will not be disturbed. Please consider this in light of Comment No. 50 that requested clarification on the extent of disturbance to the Slater Creek channel. (MDK)

63. On Page RP-35, second paragraph, it references "reclaimed Slater Creek channel" and channel hydraulics are presented in Table RP.8-5. It is not clear why channel hydraulics are presented for Slater Creek when it will not be disturbed. Is this because reclaimed tributaries to Slater Creek are changing such that the main channel of Slater Creek is expected to be change? Please clarify this in the text. (MDK)

Section RP.8.2 Permanent Impoundments

64. It is unclear exactly how many new postmine impoundments will be constructed. Table RP.8-6 identifies two impoundments (Enhancement Stock Pond 1 and Replacement Stock Pond 1), and these are shown in Exhibit RP.3-1. Exhibit RP.3-1 shows eight other permanent impoundments. Please identify if these are new features to be constructed or if they are existing stockponds that may be affected by the mining operation. (MDK)

65. Please identify in this section if there will be a net increase or decrease in post-mine water storage capacity relative to pre-mine capacity. (MDK)

66. As mentioned Comment No. 47, it is advised that the applicant discuss with the SEO-Interstate Streams Division any implications for the Yellowstone Compact if new water storage features are proposed that potentially decrease water quantity to the Tongue River. (MDK)

Section RP.8.4.2 Surface Water Monitoring

67. The text on Page RP-40 states that the surface water monitoring stations are shown on Exhibit RP.8-4. However, the stations are not shown on this Exhibit. It may be make the most sense to add these to Exhibit RP.8-5 and rename the Exhibit "Postmine Hydrologic Monitoring Locations" so the surface water stations and monitoring wells are on one Exhibit. (MDK)

Section RP.8.4.3 Postmine Impoundments

68. The text on Page RP-41 states that water quality samples will be collected at each of the postmine impoundments listed in Table RP.8-6 and presented on Exhibit RP.3-1. Please clarify in the text that this sampling list includes all ten impoundments shown. (MDK)

69. Please add the list of impoundments to be sampled to Table RP.8-9 "Surface Water Monitoring Sites". (MDK)

70. The postmine impoundments to be sampled appears to be slightly different from the impoundments listed in Mine Plan Table MP.7-1 "Operational Surface Water Monitoring Locations". Table MP.7-1 lists three impoundments (Hall Reservoir, Black Mountain No. 1 Stock Reservoir, and Legerski Bros #1 Stock Reservoir) that are not listed as postmine impoundments to be sampled. Please explain why there is a difference in the operational monitoring and postmine monitoring of some impoundments. (MDK)

71. In the second full paragraph on Page RP-41, "The water quality samples.." please also state that the water quality samples will be compared against WDEQ/WQD Class III groundwater standards, as suggested by LQD Guideline No. 17 for replacement and enhancement stockponds. (MDK)

Section RP.8.5.2 Surface Water

72. At the end of the first paragraph on Page RP-44, it predicts a "slight change" in event peaks and volumes. Please further discuss what is meant by a "slight change", i.e., what is the magnitude of the increase or decrease? (MDK)

73. In the second paragraph on Page RP-44, please clarify the extent of direct mining disturbance to Slater Creek versus tributaries of Slater Creek. This comment relates to previous Comments No. 50 and 62. (MDK)

74. Please provide a discussion as to whether the planned postmine impoundments will affect surface water quantity on or downstream of the proposed permit area. (MDK)

Section RP.9.1 Introduction

75. The second paragraph references Appendix D8. Should this be Appendix D10 (Wetlands)? Please revise this if necessary. (MDK)

76. Please add a statement up front in the Wetland Mitigation section that the USACE has not yet issued a jurisdictional determination for the proposed Brook Mine. Please also provide a statement in the text that the information in Section RP.9 may be subject to change pending the USACE determination. The USACE jurisdictional determination should also be incorporated somewhere into the Mine Permit once that is received by the Brook Mine. (MDK)

Section RP.14 Bond Release

77. The LQD no longer requires a bond release verification for "sediment control release". This is now termed "surficial stability verification". More information is available in LQD Guideline No. 23. Please revise the text for this change. (MDK)

From:	Muthu Kuchanur
To:	Bj Kristiansen
Subject:	First Round Comments - Brook Mine/ TFN 6 2/025
Date:	Tuesday, March 10, 2015 9:11:03 AM
Attachments:	MuthuKuchanur_First Round Comments_ Brook Mine _TFN 6 2-025.docx

---

Good Morning BJ,

Thanks for the opportunity to review the groundwater sections of the Brook Mine. I learnt quiet a bit about the hydrogeology in the proposed mine site. Please find attached my comments for your compilation. Feel free to contact me if you need any clarification on the review comments.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Muthu Kuchanur, LQD Division Services

DATE: March 10, 2015

SUBJECT: First Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

As requested by your November 13, 2014 memorandum, I have performed a review of groundwater items in Appendix D6, groundwater sections in mine plan and reclamation plan of the new Brook Mine permit application (TFN 6 2/025). In addition, I have provided a few comments on Appendix D5 for your consideration.

Appendix D5

Section D5.3.3.2 Overburden and Interburden

1. This section provides a discussion of the thickness of interburden and not overburden. Please provide a discussion (or a reference) on the thickness of the overburden. (MK)

Section D5.3.3.3 Coal

2. On Page D5-10, there is a good discussion about the thickness of the two coal seams. Please provide a description on the depth from land surface to these coal seams. (MK)

Section D5.3.3.3 Coal

3. Page D5-10 states, "Monarch seam exist within isolated portions of the mine areas as shown on the geologic cross sections in Addendum D5-3 and may present a secondary target." However, Table D5.3-2 does not provide the coal quality characteristics for Monarch coal seam. If monarch seam is part of the mine plan, please include the coal quality characteristics of Monarch coal seam in Table D5.3-2 and a description of thickness and depth from land surface.

4. Please include a discussion on Dietz (1, 2, 3) coal seams, if they are present in the mine permit boundary. If they are part of the mine plan, please include the coal quality characteristics in Table D5.3-2. (MK)

Section D5.3 Geology of Mine Area

5. Please provide a description of the stratigraphic units below the Masters coal seam. (MK)

Addendum D5-3 Geologic Cross Sections

6. Several of the geologic cross sections show UNK – unknown coal seam (Stringer). Please include a brief discussion about this stringer in Section D5.3.3.3 (MK)

Addendum D5-4 Isopachs

7. Please include the wells/drill holes (control points) used to interpret the isopachs and elevation contours in the maps. In addition, label all the control points with names and the thickness (or elevation, as appropriate). This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table

8. Please describe these analyses, methodology, results and provide an interpretation of their applicability to the mine/reclamation plan. (MK)

<u>Appendix D6</u>

Section D6.2.1 Regional Hydrogeology

9. Page D6-12 states, "The potential groundwater in the formation as capable of yielding small quantities of water for domestic and stock use". Please consider providing a range of estimates for well yields based on literature review or from the baseline data collected by the Brook Mine. (MK)

10. The description in this section discusses only about the Fort Union formation. Please provide a description of the overlying and underlying water-bearing formations (aquifers) and describe their hydrogeologic characteristics (flow direction, gradients, aquifer properties, general outcrop locations) on a regional context. It is noted that some of the overlying formations may be dry or discontinuous within the mine permit boundary. (MK)

11. Page D6-12 states, "The overburden is comprised of sand lenses, clinker and alluvial that have the potential of water bearing bodies. Due to the topography in this area, the valley cut through these deposits. Therefore, they are discontinuous and would not hold large quantities of water." It is noted that they are discontinuous and would not hold large quantities of water. Please provide additional justification for this statement by using the hydrogeologic data collected by the Brook Mine including any reference to the interpreted extent of dry zones based on drill holes, monitor wells and other applicable data. (MK)

12. Please clarify if there were groundwater springs or seeps observed in the areas within or adjacent to the mine permit boundary. Include a discussion (or reference) on the surface water - groundwater interactions.(MK)

Section D6.2.2.1 Monitor Well Construction, Completion and Development

13. Page D6-13 states, "No monitoring wells were completed in the overburden or interburden as no water was found in these units during drilling operations". This information is critical in demonstrating the overlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (both overburden and interburden) and their depths that were used to make this determination. (MK)

14. Page D6-13 states, “Also one well 578409-MST-UB showed the presence of water in the underburden, while all the other wells drilled into the underburden were dry and therefore not completed as wells.” Similar to the previous comment, this information is critical in demonstrating the underlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (underburden) and their depths that were used to make this determination. (MK)

Section D6.2.2.2 Aquifer Tests

15. Page D6-15 states, “Alluvial materials were also not analyzed during the aquifer testing.” The alluvial aquifer materials are one of the key factors in determining any impacts caused by mining to the alluvial aquifer. Alluvial aquifer tests will be helpful in understanding any surface water – groundwater interactions. Please provide justification for not conducting any aquifer tests in the alluvial wells. (MK)

16. Please provide justification for not observing the groundwater level reponses in the alluvial aquifer during the two aquifer tests conducted by Brook mine. (MK)

17. Page D6-16 states, “A report of these tests can be found in Addendum D6-8 and summary tabulation of the aquifer test results is included in Table D6.2.2”. Please consider including a comparison of these estimated aquifer properties with the aquifer tests conducted in other similar coal seams in the Powder River Basin (Example: Bighorn Mine). Given the number of tests conducted by the mine, this will increase the robustness of the reported estimates from the two aquifer tests. (MK)

18. It is noted that the aquifer tests were conducted for ~640 minutes. Will an increased aquifer test duration change the observed lack of interaction between the coal seams and the underburden? Please clarify with a brief description. (MK)

19. The referenced Addendum D6-8, Table D6-2 shows an increase in water levels in two of the Carney coal seam observation wells during the Masters coal seam well pumping test. Please provide an explanation for this increase in water levels during the aquifer test. (Noordbergum effect?). (MK)

20. Please provide a discussion (or reference) on the role of faults in the results of aquifer tests. (MK)

Section D6.2.2.4 Premining Potentiometric Surface

21. Please provide some additional discussion on the premining potentiometric surface maps, including ranges of estimated hydraulic gradients and groundwater velocity in the different coal seams/aquifers. (MK)

22. Please provide a discussion (or reference) on the hydrologic effects of any adjacent operations (including past coal mining activity by historic mines and Bighorn mine) on the premining information and data. (MK)

Section D6.2.2.5 Recharge and Discharge Areas

23. This section provides a good discussion on the recharge areas. However, please clarify if there are any discharges from the coal seams within the permit boundary. (MK)

24. Please provide a range of estimates for recharge from precipitation to the aquifers within the permit boundary. Also, provide a discussion if this is the primary recharge mechanism for the aquifers within the permit boundary. (MK)

25. Consider providing a description of the soil properties within the permit boundary and the use of these percent soil distributions in the discussion of infiltration within the permit boundary. (MK)

26. Page D6-18 states, "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-8". Please revise this statement to reference the correct addendum - Addendum D6-9. (MK)

Section D6.2.3 Baseline Water Quality

27. Page D6-20 states, "A piper diagram of the groundwater wells with measured values is presented in Figure D6.2-1. Please provide a discussion on the water quality types observed at each aquifer (Example: Is the water quality type variable within an aquifer? If yes, explain the potential reasons for this observed variability) based on the piper diagram. (MK)

28. Page D6-20 states, "The constituents that most frequently exceed the standard concentration limitations are ammonia, TDS, sulfate and manganese". Please clarify if these constituents exceed the Chapter 8 standards at *all* the monitor wells. (MK)

Section D6.2.4 Groundwater Rights

29. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Cheyenne copy of the TFN does not have a sheet separator and a tab for Appendix E2 in the Adjudication volume. Please provide a sheet separator and tab for Appendix E2. (MK)

30. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Please provide a summary discussion/statistics on (i) total number of water rights, (ii) number of wells, (iii) aquifer, (iv) permitted water use and other relevant summary statistics. (MK)

31. Please provide a discussion (or reference) on the premine groundwater use (including the uses reported to SEO) within the permit boundary and the adjacent areas. (MK)

Mine Plan

32. Please provide an electronic copy of the groundwater model referenced in Addendum MP-3. In addition, please provide the GIS projection coordinate of the model files that will enable the LQD to plot the model results in GIS for the purposes of producing the

CHIA (Cumulative Hydrologic Impact Assessment). The LQD review of the model files might potentially generate additional comments, clarifications or questions. (MK)

MP.1.1 Type of Mine

33. Page MP-1 states, "Below the Tongue River Member is the Lebo shale member of the Fort Union Formation which contains the Masters Seam (Cardno MM&A, October 2013)." This statement is not consistent with Table D5.3-1, Page D5-T1 and other descriptions in Appendix D5. Table D5.3-1 indicates Masters Coal seam is in the Tongue River Member. Please clarify and make appropriate changes throughout the submittal (Example: MP 4.4). (MK)

34. Major coal seams on the Brook Mine include: Dietz (1,2,3), Monarch, Upper Carney, Lower Carney and Masters.". Dietz (1,2,3) coal seam is not included in the description presented in Section D5.3.3.3, Appendix D5. Please clarify: (i) the seams that will be mined by the Brook Mine and (ii) include the description of all the coals seams as appropriate in Appendix D5 and Appendix D6. (MK)

MP.5.8 Mine Pit Dewatering Plan

35. Consider using the groundwater model referenced in Appendix D-3 to provide a description for a range of estimates on anticipated dewatering rates/volumes and groundwater inflows to the mine pit. (MK)

36. Please clarify the anticipated effects of the faults on the dewatering plan or groundwater impacts during mining. (MK)

MP.5.9 Dewatering Wells

37. Please provide a brief discussion on the anticipated quality of groundwater removed at various stages of mining. (MK)

38. If groundwater is discharged into a stream channel, anticipated discharge flow rate, water quality, and estimated seasonal discharge of the groundwater should be tabulated. The availability and suitability of this water for downstream water users should also be evaluated. Please clarify if this is an expected mechanism to discharge pumped groundwater. (MK)

MP.5.8 Groundwater Rights

39. Please include a description on any expected degradation of groundwater quality caused by the mining operation (including lateral flow through spoils) in the adjudicated wells. (MK)

MP.6.2.Groundwater

40. Please provide a brief discussion on any hydrologic effects caused by anticipated changes in recharge to the aquifers during mining. (MK)

41. Please provide an assessment of any subsidence effects (Addendum MP-6) on the hydrologic system during operations. (MK)

42. Please discuss if there are any expected impacts on groundwater quality caused by subsidence. (MK)

MP.6.3.2 Plan to Mitigate the Impacts on Groundwater

43. If the quality or quantity of adjudicated water supplies are affected, then an alternative source should be identified as part of the mitigation plan. Please provide a statement to meet this statutory requirement (W.S. § 35-11-415(b)(xii)). (MK)

MP.7.2 Groundwater Monitoring

44. Please clarify the lack of any shallow monitor wells near Hidden Water Creek, Goose Creek and Tongue River alluvium and if this will be an impediment to completely characterize the groundwater impacts during mining. (MK)

45. Please clarify the possibility of any of the monitor wells shown in Exhibit MP.7-7 being discontinued due to any constraints in the proposed-mine plan (example: mined through). (MK)

MP.8 Water use

46. Page MP-47 states, "Industrial water will be obtained from groundwater wells or from water collected in sediment and flood control reservoirs." Please clarify if the groundwater wells mentioned in this statement are wells that will be exclusively used as industrial supply wells or if they are same as dewatering wells. (MK)

47. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a discussion comparing the reported water use by other mines of similar size in the Powder River Basin.

48. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a comparison of this estimated total water use against the various estimated water sources available during mining (Example: from dewatering wells). It will be very helpful to provide a discussion on contingency measures during extreme wet/dry years or if the proposed mine plan does not require extensive dewatering. (MK)

49. Please clarify if there is any expected variability in this projected water use (example: is it closely related to the mine plan). (MK)

Addendum MP-3 Groundwater Model

50. Page Addendum MP-3-19 states, "Since, most of the wells within the modeled domain are stock wells with intermittent pumping and completed in geologic strata below the Masters Coals, they are relatively inconsequential to the groundwater system modeled in this report." Please provide a Figure (or reference) to show these wells, their depths and

discuss on why they are hydrogeologically isolated from the effects of the proposed mine. (MK)

51. Page Addendum MP-3-20 states, “The faults are significant in lateral extent and form natural no flow boundaries”. Please provide a discussion (or refer to a discussion) on how these faults were determined to be no flow boundaries. (MK)

52. Please clarify the reason for not estimating vertical hydraulic conductivity of the interburden using an aquifer test. (MK)

53. Page Addendum MP-3-25 states, “With no unnatural stresses on the system …” Please provide a discussion of the CBM impacts on the water levels. It appears that the hydrographs presented in Appendix D6 do not show the impacts of CBM. (MK)

54. There are two sub-sections for recharge, Section 2.5.3 and Section 2.6.1. Please clarify/consolidate. (MK)

55. Page Addendum MP-3-26 states, “… drain cells were placed in the model to simulate seeps from the outcrops.” Please provide a discussion on the evidence for seeps (or reference) observed during field surveys. Were there any field data collected on the location and flow rates of these seeps? (MK)

56. Page Addendum MP-3-27 states, “River cells from MODFLOW’s river boundary conditions package were placed in the model to simulate the Tongue River and Goose Creek.” Please provide a conceptual discussion supported by field observations on the type/nature of interaction of these streams with groundwater (Gaining stream vs. losing stream). (MK)

57. Please provide a discussion on any contribution of groundwater baseflow to the major surface water bodies within the permit boundary. (MK)

58. In section 3.2 MODFLOW Input Files, was aerial recharge used as an input file? Please clarify if evapotranspiration was considered as a discrete input or lumped into net aerial recharge. (MK)

59. Page Addendum MP-3-31 states, “Layer 1 – represents the coal overburden”. Please clarify if the alluvial aquifer was included in the model. Please provide justification for not considering the alluvial aquifer in the model. (MK)

60. Page Addendum MP-3-31 states, “Layer 3- Carney Interburden. This interval is generally of low to very permeability in the western portion of the Project Area”. Please clarify how the areas where Layer 3- Carney Interburden is absent are treated in the groundwater model. (MK)

61. Please include a discussion of the thickness of *all* model layers. (MK)

62. Please include a justification for not considering the underlying zones beneath the Masters coal seam in the model. (MK)

63. Please provide appropriate cross section(s) of the model grid overlaid with the drill hole data collected during baseline characterization. This will help the evaluation of the adequacy of model layer thicknesses against the stratigraphic field data. (MK)

64. Please clarify how the layers were modeled to represent the confined/unconfined aquifer types. (MK)

65. In addition to model calibration, please provide justification for the recharge rates applied in the model including any literature references. (MK)

66. Page Addendum MP-3-33 states, "Recharge is applied within the modeling software by applying the recharge to the highest active layer." Please clarify the presence of any modeled 'dry cells' in the model and the influence of applying the recharge to the layers below the dry cells. (MK)

67. Table 4.2-3. lists model porosity values. Typically, MODFLOW (flow model) does not use porosity in its calculations. Please clarify the need for this input parameter. (MK)

68. The faults are not modeled in Layer 1. Please clarify the procedure for determining the vertical extents of the faults in the model. (MK)

69. Please provide the input parameters used to model the horizontal flow barriers in the model and discuss their technical reasonableness. (MK)

70. Page Addendum MP-3-40 states, "As the current, post-CBM potentiometric surface is considered the static level……..." Please provide the implications of this assumption, on the model calibration of hydraulic parameters and the mode predicted hydrologic impacts (over estimation of drawdown vs. underestimation) (MK)

71. It is noted that Table 4.7-1 summarizes the calibration residuals and statistics from the calibrated model. Please consider providing additional presentations of the calibrated model statistics. This will enable an easier evaluation of any spatial bias in the model calibration. (MK)
    a. X-Y plot of observed vs. simulated water levels.
    b. A map plotting the residuals to show the spatial distribution
    c. Provide a summary statistics table with Mean Error, Mean Absolute Error, Sum of Squared residuals for the calibrated model. It is noted that some of these values are presented in the sensitivity analysis. However, a compiled summary statistics table would be very helpful.

72. In addition, to the measured water levels, please clarify if there were any flow measurements used for model calibration. (MK)

73. Please provide a water budget table (in acre-feet per year or cubic-feet per day) showing all the inflows into the model and outflows from the model.

74. Please provide a comparison of model simulated inflows and outflows against conceptual estimates of inflows and outflows. This comparison will act as another verification/check for the technical adequacy of the groundwater model (Example model GHB flows vs. reasonable estimated conceptual flows). (MK)

75. Page Addendum MP-3-40 states, "Due to a system of thin aquifers with similar sources and sinks and homogeneous hydraulic conductivities, the head values of the steady-state model were nearly identical between the separate coal layers as noted in Table 4.7-1." Please clarify whether this statement implies that the interburden (where present) between the coal seams is not a confining unit. (MK)

76. In figures 4.7-1, 4.7-2 and 4.7-3, please consider including the observed/interpreted water level contours and the measured water level elevations. This will enable to visually evaluate the observed vs. simulated water levels. (MK)

77. Page Addendum MP-3-45 states, "…….and if CBM production ceases, recovery rates will likely be higher than estimated in the model." Please clarify if this statement implies that currently, there are CBM wells that are operational in the area and are pumping out groundwater. (MK)

78. Please consider removing the model sensitivity to storage coefficients and porosity. *Steady state* groundwater model equations do not include these parameters in any of the model calculations. (MK)

79. Please clarify if the faults in the model and their parameters were considered in any of the sensitivity analyses. If not, please consider performing a detailed and thorough sensitivity analysis, as the faults appear to influence the drawdowns simulated by the groundwater model. (MK)

80. In addition to the simulated drawdown maps, please consider providing hydrographs at strategically selected locations. This will enable a better presentation of the impacts over time. (MK)

81. Please clarify if the three wells listed in Table 4.9-1 are the only wells considered for the analysis. Also, provide a discussion on the methodology to narrow down the analysis from several wells shown in the groundwater rights maps to these three wells. (MK)

82. Please provide (or reference) a discussion about the three wells listed in Table 4.9-1, their depths, screened intervals and other pertinent information. (MK).

83. Page Addendum MP-3-60 states, " To measure the impacts to the Tongue River and Goose Creek, a series of targets were placed along these drainages in Layer 1" Please

define the term target. Also, clarify if these targets are located in the alluvial aquifer. (MK)

84. Page Addendum MP-3-60 states, “These targets demonstrate that the estimated maximum impact to Tongue River Alluvium is conservatively estimated to reach 2.5 feet drawdown near the river.” Please expand the discussion on the impacts to surface water flows including translating the drawdown to an estimated decrease in the groundwater baseflows to Tongue River and Goose Creek. (MK)

85. Please provide a statement on any hydrologic impacts predicted by the groundwater model to areas outside the Brook mine permit boundary. (MK)

86. Please provide a discussion on the simulated impacts caused by mining to surface water – groundwater interaction within the model domain. (MK)

87. Please compare the model simulated water balance between pre-mining, during mining and post mining conditions. Consider including a table that presents the water balance during select periods showing the flows from all sources and discharges to all the sinks within the model domain. Provide a detailed discussion addressing any changes in the model simulated water balance between pre-mining, during mining and post mining conditions. (MK)

88. In addition to the maps presented on the recovery estimates, please provide hydrographs at strategically selected locations. This will enable a better presentation of recovery over time. (MK)

89. The modeling documentation lacks discussion on the backfill aquifer. In the recovery model, please clarify how the model treats the backfill aquifer (spoils aquifer) and its resaturation. Please provide a discussion (or reference) to the hydraulic properties of the backfill materials used to create the backfill aquifer and the aerial extent of the backfill aquifer. (MK)

Addendum MP-6 Subsidence Control Plan

90. Figure MP6.1-1 shows “Monarch Seam Surface Only Mining”. Please clarify if the Monarch seam is targeted for mining in the appropriate sections of Appendix D5, Appendix D6 and mine plan. (MK)

<u>Reclamation Plan</u>

RP 8.5.3 Groundwater

91. Section 8.3, page RP-38 states, “The estimated Postmine Potentiometric surfaces for the reclaimed aquifer for the Masters and Carney Seams are presented respectively in Exhibit RP.8.3 and Exhibit RP.8-4. Please provide a summary comparing and contrasting the premine potentiometric surfaces vs. post mine potentiometric surfaces. This comparison should also consider any changes in the hydraulic properties (hydraulic conductivity, storativity, recharge capacity) of the premine aquifers vs. post mine aquifers. (MK)

92. Please discuss any changes in the interaction between the surface water and groundwater systems from the premining through the postmining phases of the operation. (MK)

93. Please discuss the intersection of the postmining topographic and potentiometric surfaces and their effects on the location and size of groundwater-fed water bodies. (MK)

94. Section 8.5.3, page RP-46 states, "These water quality changes can be qualitatively predicted from the overburden mineralogy and projected post mine hydrology." Please expand this discussion on projected groundwater quality. Provide a discussion on the estimated/ projected post mining groundwater quality. A detailed description of potential changes in water quality from flow through backfill/mined out areas should be included. Any potential changes to water quality in adjacent aquifers should be discussed with respect to the potential for offsite material damage. (MK)

95. Please provide a discussion on any anticipated water use during the reclamation period. (MK)

96. Please address (or reference) any expected post-reclamation subsidence effects on the hydrologic system (both quantity and quality) and the plan to minimize these effects. (MK)

From:	Matthew Kunze
To:	David Myers
Subject:	Fwd: First Round Surface Water Comments - Brook Mine Permit Application - TFN 6 2/025
Date:	Tuesday, March 10, 2015 10:51:22 AM
Attachments:	MDK_First Round Surface Water Comments on Brook Mine New Permit Application_TFN 6 2-025.docx

---

Sorry, forgot to cc you...here is my surface water review.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

---------- Forwarded message ----------
From: **Matthew Kunze** <matthew.kunze@wyo.gov>
Date: Tue, Mar 10, 2015 at 8:47 AM
Subject: First Round Surface Water Comments - Brook Mine Permit Application - TFN 6 2/025
To: Bj Kristiansen <bj.kristiansen@wyo.gov>

Bj,

Please find my attached surface water review, as requested by your November 13, 2014 memo.

I will send the AVF comments in a separate memo after we have talked Thursday.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Matt Kunze, LQD Division Services

DATE: March 10, 2015

SUBJECT: First Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

As requested by your November 13, 2014 memorandum, I have performed a review of surface water items in the new Brook Mine permit application (TFN 6 2/025). I have reviewed Appendix D6 (Hydrology), Mine Plan, and Reclamation Plan. I have one comment for Appendix D10 (Wetlands). I also have some comments that were generated in advance of preparing the Cumulative Hydrologic Impact Assessment (CHIA) for the permitting action.

Comments on Appendix D11 (AVFs) will be sent separately.

Items Requested in Electronic Format for Preparation of CHIA

1. Please provide a CAD or ArcGIS shapefile that contains the proposed permit boundary for the Brook Mine. This file will be used to prepare maps in the CHIA. This file can be emailed to: matthew.kunze@wyo.gov. (MDK)

2. Please provide the baseline surface and groundwater data collected to support baseline characterization for the permit application. All data can be submitted on Excel templates (Attachments) found on the LQD website for the Coal Annual Report Format (CARF): http://deq.wyoming.gov/lqd/coal/resources/annual-report-3/.

    - Please provide all surface water flow and water quality data for the following surface water stations: SM578415-SW-1, SM578409-SW-1, SM578418-SW-1, and SM578512-SW-1.

    - Please provide all groundwater level and water quality data for all Brook Mine monitoring wells shown in Table D6.2-1.

Appendix D6-Hydrology

Section D6.1.2 Drainage Basin Description

3. On Page D6-2 it is stated that Slater Creek is an ephemeral stream. Aerial imagery shows a riparian area with trees and subirrigation occurring along much of the channel. PEM wetlands are also present as documented in Appendix D10. It would seem that an ephemeral stream may not be able to support these features. Please provide the justification why Slater Creek is considered an ephemeral stream, and that the stream does not contain intermittent characteristics where it is not below the local water table for a portion of the year. (MDK)

Section D6.1.3.2 Flood Studies

4. The USGS operated a peak flow gage on Slater Creek from 1967 to 1981 (Station No. 06299900, http://nwis.waterdata.usgs.gov/wy/nwis/inventory/?site_no=06299900&agency_cd=USGS). The gage was located just downstream of the proposed permit boundary near the confluence with the Tongue River. Please incorporate the annual peak flow data from this station into the permit application to illustrate the range of peak flows that might be expected from Slater Creek. (MDK)

5. Some of the U.S. Army Corps of Engineers references cited in the text (2000, 2001) do not appear in the References Section (Section D6.3). Please add these to the references list. (MDK)

6. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section D6.3. (MDK)

7. Please explain in the text if the existing impoundments (stock reservoirs, old mine pits, etc.) in both the Slater Creek and Hidden Water Creek drainages were considered in the routing functions for the HEC-HMS runoff estimates. These features would likely have an effect on attenuating peak flows. (MDK)

8. As the text states on Page D6-5, the HEC-HMS runoff estimates in Table D6.1-7 are higher than the Miller (2003) equation estimates. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) equation estimates.

   The Miller (2003) equation for this region used, in part, data from the USGS peak flow gage on Slater Creek, so it would seem that the Miller (2003) estimates may be more reasonable. For example, compared to the HEC-HMS estimates, the 15-year record from the peak flow gage on Slater Creek would not register at anything greater than a five-year event. Furthermore, the May 18, 1978 event on Slater Creek resulted in a peak flow of 1,100 cfs, which according to the HEC-HMS estimates would only be around a 2-year event. USGS studies have shown that the May 1978 flood event was estimated to be a 100-year event on some parts of the Tongue River in this area (http://pubs.usgs.gov/pp/1244/report.pdf). (MDK)

Section D6.1.5.1 Monitoring Stations

9. Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

10. On Page D6-8, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

11. On Page D6-8, second paragraph, it states that increased *E.Coli* from samples collected in 2006 were attributable to high flows in May-June 2010. Were the samples also collected in 2010 and not 2006? Please revise this sentence. (MDK)

12. On Page D6-8, second paragraph, it would be informative to add that, in addition to the SCCD, other entities such as the Big Horn Mine, USGS, and WDEQ/WQD have collected water quality data on the Tongue River and Goose Creek near the proposed mine. It may also be informative to mention that sections of the Tongue River in the vicinity of the proposed mine are on the State's 303(d) list since certain uses are not supported due to impaired water quality. Goose Creek has also been on the 303(d) list in the past and a TMDL has been prepared. Information can be found at: http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/ and http://deq.wyoming.gov/wqd/tmdl/. (MDK)

Section D6.1.5.2 Surface Water Quantity

13. The Big Horn Mine (WDEQ/LQD Permit 213) operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. This station was located approximately ¼ mile upstream from station SM578415-SW-1 that was installed by the Brook Mine. The LQD Hydrology Database contains mean daily flow data from this station from 1982 to 1997, although several years are missing data. Baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request or a more complete dataset may be available if requested from the Big Horn Mine. (MDK)

Section D6.1.5.3 Surface Water Quality

14. Please briefly discuss in the text the water quality results from Slater Creek in the context of WQD Surface Water Quality Standards for Class 3B waters (see Chapter 1 of WQD Rules and Regulations). This would reveal whether or not designated uses were being met prior to mining. The two samples from Slater Creek indicate no exceedences of Class 3B criteria, indicating uses are supported. (MDK)

15. It is understood that water was not flowing in Hidden Water Creek so the applicant could not collect a sample for baseline purposes. However, as previously mentioned, the Big Horn Mine operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. The LQD Hydrology Database contains nine water quality samples collected at this site from 1979 to 1989. Baseline characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request. (MDK)

Section D6.1.5.4 Sediment Transport

16. This section would be enhanced by including data from a single sediment sample collected on Slater Creek at USGS Station No. 06299900 (peak flow gage previously discussed in Comment No. 4). This sample was collected in June 1967 at a flow of 18 cfs. The TSS was 11,600 mg/L and the suspended sediment discharge was 564 tons/day. (MDK)

Addendum D6-5 – Rating Curves

17. A rating curve developed using only the Manning equation will provide only a rough estimate of flows given the uncertainty in the Manning's roughness coefficient. It is recommended that direct discharge measurements also be taken over time to help evaluate the rating curves developed for the four monitoring sites. (MDK)

18. Given the uncertainty in the Manning equation, the estimated flow rates provided in Table D6-3 and Attachment D6-5-A (Rating Tables) are reported at much too high a level of precision to be meaningful. Depending on the magnitude of the flow estimate, there should be only one or two significant figures provided. For example, 0.29 cfs = 0.3 cfs and 3,584.38 cfs = 3,600 cfs. Please revise these tables. (MDK)

<u>Appendix D10-Wetlands</u>

Section D10.2 Results

19. The text may want to state when (what date) RAMACO requested the jurisdictional determination from the USACE, and include this request letter as an Addendum to Appendix D10. This would provide documentation that the request was submitted, as receipt of the USACE determination may lag behind the LQD permitting process. (MDK)

<u>Mine Plan</u>

Section MP.4.1 Mining Sequence

20. On Exhibit MP.4-1, please attempt to show the areas that would be highwall mined versus surface mined. These layers are currently not found until Exhibit MP.15-1. Alternatively, the text in this Section could specify that the areas to be highwall versus surface mined are shown in Exhibit MP.15-1. (MDK)

Section MP.5.1 Surface Drainage and Erosion Plan

21. Only Slater Creek and Hidden Water Creek are labeled and shown in Exhibit MP.5-1. In order to better evaluate the Hydrologic Control Plan, please provide labels and locations for the other stream channels, including Tongue River, Goose Creek, East Fork Earley Creek, and the other unnamed channels (as shown on the USGS 24K Quad) on the proposed permit area. (MDK)

22. Exhibit MP.5-1 shows overburden stockpiles OB-13 and OB-12, as well as topsoil stockpile TS-6, occurring directly over the Slater Creek channel. The Exhibit does not show any diversion ditches to be used in these locations. Please either move the location of the stockpiles or present a plan to use a diversion to route Slater Creek around the stockpiles. (MDK)

Section MP.5.2 Sedimentation and Wastewater Impoundments

23. Exhibit MP.5-1 shows the locations of two "sediment basins". Are these considered the same as "sedimentation impoundments", as discussed in this Section? If so, the designs for these two impoundments are not found within the Mine Plan. (MDK)

Section MP.5.3 Flood Control

24. This section discusses flood control reservoirs but it is not mentioned how many flood control reservoirs would be constructed and where their locations would be. Please provide this information to comply with LQD Coal Rules and Regulations, Chapter 2, Section 5(a)(i)(D)(IV). (MDK)

Section MP.5.4 Diversions

25. This section mentions permanent diversions, but there are no apparent plans for permanent diversions. Please discuss if permanent diversions are anticipated as part of the mining operation, or if all diversions will be temporary. (MDK)

26. Exhibit MP.5-1 shows only one diversion ditch for Hidden Water Creek in T57N, R84W, Section 9. Please discuss this particular diversion and its typical design in more detail in Section MP.5.4. (MDK)

Section MP.5.5 Culverts

27. Please provide a brief statement that commits to a periodic culvert inspection and maintenance plan to ensure that culverts will function properly over time. (MDK)

Section MP.5.8 Mine Pit Dewatering Plan

28. The first sentence references a sedimentation reservoir. Where is the location of this sedimentation reservoir? Are these the "sediment basins" shown in Exhibit MP.5-1? If not these sedimentation reservoirs need to be added to this Exhibit. (MDK)

29. The first paragraph references treating and discharging pit water. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Section MP.6.1 Surface Water

30. Exhibit MP.1-1 shows surface disturbance directly over a few areas of Slater Creek and Hidden Water Creek. Please identify the source of disturbance in these areas. Direct disturbance of the channel should be avoided unless there is a plan for a diversion to route the stream around the disturbance. (MDK)

31. The mining trenches are often discussed with reference to Exhibit MP.1-1. However, the trenches are not shown on this Exhibit. Please add the locations of the trenches to Exhibit MP.1-1. (MDK)

32. On Page MP-39, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining disturbance will be treated prior to discharge. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

33. Please discuss the diversion ditch for Hidden Water Creek in the first carryover paragraph on Page MP-39. (MDK)

34. On Page MP-40, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining activities will be treated prior to discharge. Please reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

35. On Page MP-40, there is a sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility". This statement is unclear. Are the impacts to the actual Slater Creek channel or the uplands and other tributaries in the watershed? Is it *reduced* ground cover and *increased* soil erodiblity? Please provide a more explicit description of the possible impacts. (MDK)

36. Please provide a discussion on whether the proposed mining operation would affect surface water quality such that designated uses would be affected on the major streams on and adjacent to the proposed permit area. (MDK)

37. The text describes possible reductions in peak flows and storm volumes. Please describe in the PHC if the proposed mining operation will have any effects on nearby or downstream surface water rights. (MDK)

38. Please add a brief statement to the PHC that if it is determined that the mining operation affects a surface water right, that water right would be replaced with a water source of similar quantity and quality as provided by W.S. § 35-11-415(b)(xii). (MDK)

Section MP.6.1.1 Land Erosion Stability

39. It is unclear the intent of this section. It seems to be out of place in the mine plan, as it discusses the USLE in the context of only native and reclaimed conditions. Furthermore, no data other than the K factors are presented in Mine Plan Tables (Table MP.6.1). The Reclamation Plan also does not discuss applying the USLE, so it would seem that Section MP.6.1.1 should be removed unless a USLE analysis is completed of pre- vs during- vs postmine erosion predictions. (MDK)

Section MP.7.1 Surface Water Monitoring

40. It is unclear why reservoirs will be monitored in the operational monitoring program when these features were not sampled for during baseline characterization. If the reservoirs have the potential to be affected by the mining operation they should be sampled prior to mining with this information presented in Appendix D6. (MDK)

41. Please add the reservoir monitoring locations listed in Table MP.7-1 to Exhibit MP.7.1. (MDK)

42. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

43. Please identify what type of water quantity data will be generated from the continuous stage monitoring. For example, will mean daily flow rates and/or peak daily flow rates be estimated, as these would likely be submitted to the LQD in the Annual Report? (MDK)

44. The text in the last paragraph on Page MP-45 states that water quality samples will be collected from a single station using an ISCO automatic sampler. Please identify in the text which station this is. Also, please explain the rationale for using an ISCO sampler at only one of the four stream monitoring sites. (MDK)

45. The text in the first paragraph on Page MP-46 states that data will be evaluated to determine if any surface water and groundwater interactions exist. It would seem that any interactions should have already been identified during the baseline characterization of the hydrological system on and near the proposed permit area. It does not appear that the permit application discusses surface/groundwater interactions. (MDK)

Section MP.8 Water Use

46. Please state in the text that all water from surface reservoirs or wells will be used under appropriate permits from the State Engineer's Office (SEO). (MDK)

47. It is advised that the applicant discuss with the SEO-Interstate Streams Division any implications that water use may have under the Yellowstone River Compact. (MDK)

<u>Addendum MP-6 Subsidence Control Plan</u>

Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation

48. The text states that subsidence monitoring would be discontinued if no evidence of subsidence occurred after six months after highwall mining. Please include a clarifying statement that the applicant would remediate subsidence up until bond release is approved, even if the subsidence was detected later than the six months of initial monitoring. (MDK)

<u>Reclamation Plan</u>

Section RP.3.3 Postmine Slope Analysis

49. Please provide a discussion that compares the pre-mine vs. post-mine slope characteristics. A table would be helpful that compared the minimum, maximum, and average slopes under pre-mine and post-mine conditions. (MDK)

Section RP.3.5 Drainage Reestablishment

50. It is stated that mining will disturb portions of the Slater Creek channel and the reclamation will entail reconstruction. However, the Mine Plan PHC (Section MP.6.1) stated that Slater Creek "will still flow naturally around the trench", and "Because Slater Creek's flow will not come into contact with mining activities, no impact will be made to water quality". Please provide a clear and explicit description of the extent of direct disturbance to the Slater Creek channel. This description should be consistent between the Mine Plan and Reclamation Plan. (MDK)

Section RP.4.2 Mitigation of Unsuitable Material

51. Minor channels are defined as ephemeral streams but there is no definition provided for "major channels". Please provide a definition and also illustrate an example of a major channel within the proposed permit boundary that would fit into this category. (MDK)

Section RP.5.6 Erosion Control and Conservation Practices

52. The first sentence of the second paragraph…"Rills and gullies…" needs revised, as it appears to be missing one or more words. (MDK)

Section RP.7.4 Aquatic Habitat

53. The second sentence discusses stockponds possibly being disturbed by mining activities. The Mine Plan PHC did not mention that any existing stockponds would be disturbed by mining activities. If stockponds are to be disturbed by the mining operation, this should be discussed in the Mine Plan PHC. (MDK)

54. The text states that two additional postmine impoundments will be constructed and their location is shown in Exhibit RP.3-1. This Exhibit shows <u>ten</u> permanent impoundments, both on and adjacent to the proposed permit area. Please revise this discrepancy in the text or change the symbology in the Exhibit to clearly show the two permanent post-mine impoundments. (MDK)

Section RP.8.1 Drainage Basin Reconstruction

55. Please add the major stream name labels (Tongue River, Goose Creek, East Fork Earley Creek, Slater Creek, Hidden Water Creek) to Exhibit RP.8-1. (MDK)

56. Please explain in the text how the postmine drainage basin parameters in Table RP.8-1 were determined. (MDK)

57. The text states that a comparison of drainage basin parameters in Table RP.8-1 and Exhibit RP.8-1 show that the overall hydrologic balance will remain largely unchanged. This conclusion is not obvious from the Table and Exhibit. How similar are the postmine drainage basin parameters to the pre-mine parameters? Which sub-drainages show the largest change from pre-mine conditions? The text needs to include a more thorough discussion to demonstrate to the reader why exactly the postmine hydrologic balance will be unchanged. (MDK)

Section RP.8.1.1 Discharge Estimates

58. The text provides no discussion of the comparison between the pre-mine and postmine modelled discharge values. Please provide this discussion so the reader can determine if the differences are minor or major. (MDK)

59. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section RP.17. (MDK)

60. Similar to Comment No. 8 made for Appendix D6, the HEC-HMS runoff estimates in Table RP.8.4 are much higher than the Miller (2003) equations. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) regression equations.

Section RP.8.1.2 Channel/Floodplain Design

61. The last sentence in the first paragraph states that stream reaches for which designed cross sections are provided are identified in plan on Exhibit RP.8-1. There is nothing on this Exhibit that shows which stream reaches have designed cross sections, nor which stream channels are being reconstructed. Please clearly identify this information on this Exhibit. (MDK)

62. Exhibit RP.8-2 shows that the main Slater Creek channel will not be disturbed. Please consider this in light of Comment No. 50 that requested clarification on the extent of disturbance to the Slater Creek channel. (MDK)

63. On Page RP-35, second paragraph, it references "reclaimed Slater Creek channel" and channel hydraulics are presented in Table RP.8-5. It is not clear why channel hydraulics are presented for Slater Creek when it will not be disturbed. Is this because reclaimed tributaries to Slater Creek are changing such that the main channel of Slater Creek is expected to be change? Please clarify this in the text. (MDK)

Section RP.8.2 Permanent Impoundments

64. It is unclear exactly how many new postmine impoundments will be constructed. Table RP.8-6 identifies two impoundments (Enhancement Stock Pond 1 and Replacement Stock Pond 1), and these are shown in Exhibit RP.3-1. Exhibit RP.3-1 shows eight other permanent impoundments. Please identify if these are new features to be constructed or if they are existing stockponds that may be affected by the mining operation. (MDK)

65. Please identify in this section if there will be a net increase or decrease in post-mine water storage capacity relative to pre-mine capacity. (MDK)

66. As mentioned Comment No. 47, it is advised that the applicant discuss with the SEO-Interstate Streams Division any implications for the Yellowstone Compact if new water storage features are proposed that potentially decrease water quantity to the Tongue River. (MDK)

Section RP.8.4.2 Surface Water Monitoring

67. The text on Page RP-40 states that the surface water monitoring stations are shown on Exhibit RP.8-4. However, the stations are not shown on this Exhibit. It may be make the most sense to add these to Exhibit RP.8-5 and rename the Exhibit "Postmine Hydrologic Monitoring Locations" so the surface water stations and monitoring wells are on one Exhibit. (MDK)

Section RP.8.4.3 Postmine Impoundments

68. The text on Page RP-41 states that water quality samples will be collected at each of the postmine impoundments listed in Table RP.8-6 and presented on Exhibit RP.3-1. Please clarify in the text that this sampling list includes all ten impoundments shown. (MDK)

69. Please add the list of impoundments to be sampled to Table RP.8-9 "Surface Water Monitoring Sites". (MDK)

70. The postmine impoundments to be sampled appears to be slightly different from the impoundments listed in Mine Plan Table MP.7-1 "Operational Surface Water Monitoring Locations". Table MP.7-1 lists three impoundments (Hall Reservoir, Black Mountain No. 1 Stock Reservoir, and Legerski Bros #1 Stock Reservoir) that are not listed as postmine impoundments to be sampled. Please explain why there is a difference in the operational monitoring and postmine monitoring of some impoundments. (MDK)

71. In the second full paragraph on Page RP-41, "The water quality samples.." please also state that the water quality samples will be compared against WDEQ/WQD Class III groundwater standards, as suggested by LQD Guideline No. 17 for replacement and enhancement stockponds. (MDK)

Section RP.8.5.2 Surface Water

72. At the end of the first paragraph on Page RP-44, it predicts a "slight change" in event peaks and volumes. Please further discuss what is meant by a "slight change", i.e., what is the magnitude of the increase or decrease? (MDK)

73. In the second paragraph on Page RP-44, please clarify the extent of direct mining disturbance to Slater Creek versus tributaries of Slater Creek. This comment relates to previous Comments No. 50 and 62. (MDK)

74. Please provide a discussion as to whether the planned postmine impoundments will affect surface water quantity on or downstream of the proposed permit area. (MDK)

Section RP.9.1 Introduction

75. The second paragraph references Appendix D8. Should this be Appendix D10 (Wetlands)? Please revise this if necessary. (MDK)

76. Please add a statement up front in the Wetland Mitigation section that the USACE has not yet issued a jurisdictional determination for the proposed Brook Mine. Please also provide a statement in the text that the information in Section RP.9 may be subject to change pending the USACE determination. The USACE jurisdictional determination should also be incorporated somewhere into the Mine Permit once that is received by the Brook Mine. (MDK)

Section RP.14 Bond Release

77. The LQD no longer requires a bond release verification for "sediment control release". This is now termed "surficial stability verification". More information is available in LQD Guideline No. 23. Please revise the text for this change. (MDK)

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Call with Matt Re: Surface Water and AVFs Brook Mine
Date: Thursday, March 12, 2015 8:43:44 AM

Matt,

What number were we going to use for the call? Did you want me to call your office, or another number?

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Monday, March 09, 2015 9:57 AM
To: BJ Kristiansen
Cc: David Myers
Subject: Re: Call with Matt Re: Surface Water and AVFs Brook Mine

Bj,

Can you hold off pulling these into the main comment document for now until we have a chance to talk on Thursday on the AVF section. It could be that my comments will remain unchanged but for now I wanted to just consider these as draft comments for our discussion Thursday.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Mon, Mar 9, 2015 at 9:56 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Thank you Matt. I will pull these into the comments document.
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Monday, March 09, 2015 8:36 AM
> **To:** David Myers
> **Cc:** Bj Kristiansen
> **Subject:** Re: Call with Matt Re: Surface Water and AVFs Brook Mine

Here are my specific "Draft" comments on the AVF Section.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Mar 3, 2015 at 12:26 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Here are the main issues I noted in the AVF section. I do not have access to my specific comments but here are the topics:
>
> - Questionable determination on lack of unconsolidated stream laid deposits in Slater Creek and Hidden Water Creek. Also conflicts with Big Horn Mine Permit conclusion on unconsolidated stream laid deposits in Hidden Water Creek.
> - Incomplete assessment of artificial flood irrigation on Slater Creek upstream of proposed permit boundary.
> - No apparent conclusion on AVF status of other streams in study area (Earley Creek and East Fork Earley Creek).
> - Missing impact analysis and monitoring system for adjacent AVFs on Tongue River and Goose Creek, as required by LQD Coal R&R.
>
> Thanks...I will send my specific comments next week before the call.
>
> Matt
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Tue, Mar 3, 2015 at 12:45 PM, David Myers <david.myers@wyo.gov> wrote:
>
>> Hi BJ,
>>
>> Matt is at this OSM training with me and we would like to discuss our brook mine comments after I get mine completed. That's what that invite is about. Thanks,
>>
>> Dave

David J. Myers
Natural Resources Analyst
WDEQ / LQD District III
2100 West 5th St.
Sheridan, WY 82801
(307) 675-5614
E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Call with Matt Re: Surface Water and AVFs Brook Mine
Date: Thursday, March 12, 2015 8:45:59 AM

I will be in our Hydro library...the number there is 777-3624.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Thu, Mar 12, 2015 at 8:45 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> What number were we going to use for the call? Did you want me to call your office, or another number?
>
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Monday, March 09, 2015 9:57 AM
> **To:** BJ Kristiansen
> **Cc:** David Myers
> **Subject:** Re: Call with Matt Re: Surface Water and AVFs Brook Mine
>
> Bj,
>
> Can you hold off pulling these into the main comment document for now until we have a chance to talk on Thursday on the AVF section. It could be that my comments will remain unchanged but for now I wanted to just consider these as draft comments for our discussion Thursday.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Mon, Mar 9, 2015 at 9:56 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Thank you Matt. I will pull these into the comments document.
>
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Monday, March 09, 2015 8:36 AM
> **To:** David Myers
> **Cc:** Bj Kristiansen
> **Subject:** Re: Call with Matt Re: Surface Water and AVFs Brook Mine
>
> Here are my specific "Draft" comments on the AVF Section.
>
> Matt
>
> ---
>
> Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Tue, Mar 3, 2015 at 12:26 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Here are the main issues I noted in the AVF section. I do not have access to my specific comments but here are the topics:
>
> - Questionable determination on lack of unconsolidated stream laid deposits in Slater Creek and Hidden Water Creek. Also conflicts with Big Horn Mine Permit conclusion on unconsolidated stream laid deposits in Hidden Water Creek.
> - Incomplete assessment of artificial flood irrigation on Slater Creek upstream of proposed permit boundary.
> - No apparent conclusion on AVF status of other streams in study area (Earley Creek and East Fork Earley Creek).
> - Missing impact analysis and monitoring system for adjacent AVFs on Tongue River and Goose Creek, as required by LQD Coal R&R.
>
> Thanks...I will send my specific comments next week before the call.
>
> Matt
>
> ---
>
> Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Tue, Mar 3, 2015 at 12:45 PM, David Myers <david.myers@wyo.gov> wrote:

> Hi BJ,
>
> Matt is at this OSM training with me and we would like to discuss our brook mine comments after I get mine completed. That's what that invite is about. Thanks,
>
> Dave
>
> *David J. Myers*
>
> *Natural Resources Analyst*
>
> *WDEQ / LQD District III*
>
> *2100 West 5th St.*
>
> *Sheridan, WY 82801*
>
> *(307) 675-5614*
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records

> Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Call with Matt Re: Surface Water and AVFs Brook Mine
Date: Thursday, March 12, 2015 9:39:32 AM

Got it.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Thursday, March 12, 2015 8:46 AM
To: BJ Kristiansen
Subject: Re: Call with Matt Re: Surface Water and AVFs Brook Mine

I will be in our Hydro library...the number there is 777-3624.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Thu, Mar 12, 2015 at 8:45 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> What number were we going to use for the call? Did you want me to call your office, or another number?
>
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Monday, March 09, 2015 9:57 AM
> **To:** BJ Kristiansen
> **Cc:** David Myers
> **Subject:** Re: Call with Matt Re: Surface Water and AVFs Brook Mine
>
> Bj,
>
> Can you hold off pulling these into the main comment document for now until we have a chance to talk on Thursday on the AVF section. It could be that my comments will remain unchanged but for now I wanted to just consider these as draft comments for our discussion Thursday.
>
> Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Mon, Mar 9, 2015 at 9:56 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Thank you Matt. I will pull these into the comments document.
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Monday, March 09, 2015 8:36 AM
> **To:** David Myers
> **Cc:** Bj Kristiansen
> **Subject:** Re: Call with Matt Re: Surface Water and AVFs Brook Mine
>
> Here are my specific "Draft" comments on the AVF Section.
>
> Matt
>
> ---
>
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Tue, Mar 3, 2015 at 12:26 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
> > Here are the main issues I noted in the AVF section. I do not have access to my specific comments but here are the topics:
> >
> > - Questionable determination on lack of unconsolidated stream laid deposits in Slater Creek and Hidden Water Creek. Also conflicts with Big Horn Mine Permit conclusion on unconsolidated stream laid deposits in Hidden Water Creek.
> > - Incomplete assessment of artificial flood irrigation on Slater Creek upstream of proposed permit boundary.
> > - No apparent conclusion on AVF status of other streams in study area (Earley Creek and East Fork Earley Creek).
> > - Missing impact analysis and monitoring system for adjacent AVFs on Tongue River and Goose Creek, as required by LQD Coal R&R.

Thanks...I will send my specific comments next week before the call.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Mar 3, 2015 at 12:45 PM, David Myers <david.myers@wyo.gov> wrote:

> Hi BJ,
>
> Matt is at this OSM training with me and we would like to discuss our brook mine comments after I get mine completed. That's what that invite is about. Thanks,
>
> Dave
>
> *David J. Myers*
> *Natural Resources Analyst*
> *WDEQ / LQD District III*
> *2100 West 5th St.*
> *Sheridan, WY 82801*
> *(307) 675-5614*
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	andrew kuhlmann
Subject:	Fwd: letter re Ramaco Brook Mine permit application
Date:	Thursday, March 12, 2015 11:30:29 AM
Attachments:	2015 March ltr to DEQ re completeness of Ramaco permit app.pdf

---

I should have forwarded this earlier. Alan
---------- Forwarded message ----------
From: **Shannon Anderson** <sanderson@powderriverbasin.org>
Date: Tue, Mar 3, 2015 at 4:32 PM
Subject: letter re Ramaco Brook Mine permit application
To: Alan Edwards <alan.edwards@wyo.gov>
Cc: Carol Bilbrough <carol.bilbrough@wyo.gov>, Mark Rogaczewski <mark.rogaczewski@wyo.gov>

Dear Mr. Edwards,

Please see the attached letter. A hard copy will come in the mail.

Thanks, Shannon

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
Office: 307-777-7062

Alan.Edwards@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

ENCOURAGING RESPONSIBLE DEVELOPMENT TODAY ~ FOR TOMORROW

934 N. MAIN ST. SHERIDAN, WY 82801 (307) 672-5809 FAX (307) 672-5800
INFO@POWDERRIVERBASIN.ORG WWW.POWDERRIVERBASIN.ORG

POWDER RIVER BASIN
Resource Council

Via electronic and first-class mail

Alan Edwards
Acting Administrator, Land Quality Division
Wyoming Department of Environmental Quality
122 W. 25th St.
Herschler Building
Cheyenne, WY 82002

March 3, 2015

Dear Mr. Edwards,

We are writing to inform you of concerns we have about the Brook Mine permit application submitted by Brook Mining Company, LLC, a wholly owned subsidiary of Ramaco, LLC. We are concerned that DEQ prematurely determined that the application was complete before requiring and verifying several pieces of important information related to the application. We ask that DEQ consider our concerns and respond to us, in writing, regarding our questions and what the agency's course of action will be in response.

First, it seems unlikely that Ramaco will actually be the operator of the Brook Mine. Based on information publicly available on the company's website and from what we have heard about the company from landowners and other parties, it does not appear that the company has the staff and expertise capable of operating a coal mine. DEQ regulations require "complete identification" of "[t]he names, addresses and telephone numbers of any operators, if different from the applicant." Land Quality Rules & Regulations (hereafter "LQRR") Ch. 2 § 2(a)(i). Upon our review of the application, Ramaco did not identify who the operator of the coal mine would be. Please verify that Ramaco will indeed be the operator of the proposed mine and if so, that they have the necessary staff and expertise to in fact operate the mine. If an additional operator is proposed, please require Ramaco to identify that operator in its permit to mine.

Second, we have heard from various sources that Ramaco does not have all of the coal rights required by law to mine its proposed permit area.[1] Additionally, we have heard from some neighboring landowners that the company's consultants were engaging in data collection for the permit application, including vegetation and water sampling, without all of the appropriate authorizations from landowners. We take these issues very seriously as protection of property rights is a cornerstone of our organizational mission. Although we have only heard of this second-hand and cannot provide verifying information to you, we ask DEQ to look into these issues and speak with landowners in the area about the company and its consultants' activities.

[1] For instance, while the Padlock Ranch is identified as a coal owner in the adjudication section of the permit application, the ranch is neither included in the list of fee coal right owners subject to extraction nor the list of fee coal right owners not subject to coal extraction in the Identification of Interests portion of the application.

In regard to the permit application, the Environmental Quality Act requires a mining permit to include "[a] sworn statement stating that the applicant has the right and power by legal estate to mine from the land for which the permit is desired." W.S. § 35-11-406(a)(ii). For split estate lands, the Act also requires "an instrument of consent from the resident or agricultural landowner, if different from the owner of the mineral estate, granting the applicant permission to enter and commence surface mining operation, and also written approval of the applicant's mining plan and reclamation plan." *Id*. at § 35-11-406(b)(xi). The regulations further clarify that "[t]he right of entry statements and documents required by W.S. § 35-11-406(a)(ii) and (b)(xi) shall clearly explain and support the legal rights claimed by the applicant and shall also include whether that right is the subject of pending litigation." LQRR § 2(a)(iii). Based on conversations with landowners and our review of the permit application, we do not believe Ramaco has met these requirements.

Third, it is our understanding that part of the proposed permit overlaps with the current permit for the Big Horn Coal Company. Please clarify whether this is the case and if so, whether Ramaco has obtained authorization from the Big Horn Coal Company to mine within its permit boundary and please provide us with copies of that authorization.

Thank your for your attention to our concerns. We look forward to your response.

Sincerely,

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St.
Sheridan, WY 82801
(307) 672-5809
sanderson@powderriverbasin.org

cc: Brook Mining Co./Ramaco, LLC, Throne Law Office (attorney and registered agent for Brook Mining Co. and Ramaco, LLC)

From: Google Calendar
To: Matthew Kunze; David Myers
Subject: Notification: Brook MIne Call / AVF / Surface Water Review @ Thu Mar 12, 2015 1pm - 2pm (Matthew Kunze)
Date: Thursday, March 12, 2015 12:44:51 PM

Brook MIne Call / AVF / Surface Water Review

more details »

When Thu Mar 12, 2015 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/david

Calendar Matthew Kunze

Who
- David Myers - organizer
- Bj Kristiansen
- Matthew Kunze

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for notifications on calendar Matthew Kunze.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From:	BJ Kristiansen
To:	andrew kuhlmann
Cc:	mark.rogaczewski@wyo.gov
Subject:	Brook Mine - attorney client privilege
Date:	Monday, March 16, 2015 11:05:59 AM
Attachments:	image001.jpg

Andrew,

Where are you on the Brook Mine deed situation? I have less than 3 weeks to complete the round 1 review and send it out to the RAMACO personnel on April 3. Rumors are beginning to swirl around Sheridan since the sheriff was called in several weeks ago. Padlock Ranch appears to be taking a wait-and-see approach. Our round 1 review will be in the hands of RAMACO for an indefinite period of time and if there is no landowner permission decision made when the first round of responses comes back from Brook Mine consultants, the permit process will stop. Any input you may have would be welcome as we are operating in the dark, or at least the twilight.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Muthu Kuchanur
To:	sanderson@powderriverbasin.org
Cc:	Matthew Kunze
Subject:	Re: CHIA for Brook Mine
Date:	Thursday, March 19, 2015 8:23:04 PM

Hi Shannon,

Thanks for your question. I have forwarded your question to Matt Kunze, LQD CHIA coordinator to respond.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Thu, Mar 19, 2015 at 3:09 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Hi Muthu,
>
> I am wondering if you could give me a status update on the CHIA for the proposed Brook Mine in Sheridan County. Is that something that will be released at the time of the draft permit? Or will it be available for public review before then? Thanks,
> Shannon
>
>
> Shannon Anderson
>
> Powder River Basin Resource Council
>
> 934 N. Main St., Sheridan, WY 82801
>
> 307-672-5809 cell: 307-763-0995
>
> sanderson@powderriverbasin.org
>
> Join us at www.powderriverbasin.org
>

Follow us at https://twitter.com/PRBResCouncil

From:	Matthew Kunze
To:	sanderson@powderriverbasin.org
Cc:	Bj Kristiansen; Muthu Kuchanur; Carol Bilbrough; Mark Rogaczewski
Subject:	Re: CHIA for Brook Mine
Date:	Friday, March 20, 2015 8:33:10 AM

Hi Shannon,

At this point, we have only been involved in providing hydrology review comments for the first round technical review of the permit application. We have not started work on the CHIA yet, but will likely start some preliminary work soon.

Typically the hydrology-related issues raised in a technical review need to be resolved before we can finish our work on the CHIA. Because of this, a draft CHIA is usually not complete until the permit application is ready to go to final public notice. At that time we send the draft CHIA to the State Engineer's Office and DEQ Water Quality Division for review and concurrence on our findings. The CHIA must be finalized and signed by the DEQ Director and State Engineer before the permit application can be approved.

Our goal is to have the draft CHIA completed at the time the application goes to public notice. Please keep in mind since this application is very early in the review process, this will be several months away.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Thu, Mar 19, 2015 at 8:23 PM, Muthu Kuchanur <muthu.kuchanur@wyo.gov> wrote:

> Hi Shannon,
>
> Thanks for your question. I have forwarded your question to Matt Kunze, LQD CHIA coordinator to respond.
>
> Best regards,
> Muthu
>
> ----------
> Muthu Kuchanur, Ph.D., P.E.
>
> Geology Supervisor,
> Division Services - Land Quality Division,
> Wyoming Department of Environmental Quality,

Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Thu, Mar 19, 2015 at 3:09 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Hi Muthu,
>
> I am wondering if you could give me a status update on the CHIA for the proposed Brook Mine in Sheridan County. Is that something that will be released at the time of the draft permit? Or will it be available for public review before then? Thanks, Shannon
>
> Shannon Anderson
>
> Powder River Basin Resource Council
>
> 934 N. Main St., Sheridan, WY 82801
>
> 307-672-5809 cell: 307-763-0995
>
> sanderson@powderriverbasin.org
>
> Join us at www.powderriverbasin.org
>
> Follow us at https://twitter.com/PRBResCouncil

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Lynne Boomgaarden
To:	andrew kuhlmann
Cc:	Maria-Nicolle Beringer
Subject:	Big Horn Coal Company - Surface Owner Status vis Brook Mining Company Mine Permit Application
Date:	Sunday, March 22, 2015 12:45:52 PM
Attachments:	image001.jpg

Hello Andrew –
I am following up on behalf of my client, Big Horn Coal Co., to ask whether you have had an opportunity to review the letter I sent on Big Horn Coal's behalf asserting, among other things, Big Horn Coal's position with regard to its rights under W.S. 35-1-406(b)(xii) to receive the same mine plan and reclamation plan that Brook submitted to WDEQ for review and to exercise its right to consent or not consent to the same, understanding that Brook must go to the Environmental Quality Counsel for an order in lieu of consent, if necessary. I would appreciate it if you could tell me whether you will be responding to Big Horn Coal's letter on WDEQ's behalf, and if so, when a response can be expected.
Thank you and best regards,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Alan Edwards
To:	andrew.kuhlmann@wyo.gov
Subject:	Out-of-office Re: Draft comments for Brook Mining Application - Attorney-Client Communication
Date:	Tuesday, March 24, 2015 9:06:29 AM

I will be out of the office through Friday March 27th as a minimum and possibly longer. I will check e-mail when possible and respond on a limited basis. Alan

--

Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
Office: 307-777-7062
Alan.Edwards@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Shannon Anderson
Cc:	Carol Bilbrough; Mark Rogaczewski; andrew kuhlmann
Subject:	Re: letter re Ramaco Brook Mine permit application
Date:	Monday, March 30, 2015 8:20:09 PM

Again, my apologies for the delay in my response.

First, a couple of general comments:

1. The Environmental Quality Act (EQA) and the Land Quality Division (LQD) rules and regulations do not include provisions for public comment as part of the completeness review for mine permit applications.
2. The Department of Environmental Quality (DEQ) does not accept e-mail comments for public input during public notice and review on permit related activities,.

Regarding the Ramaco Brook Mine permit application, LQD is aware that there is a dispute regarding surface ownership. For the purposes of the completeness review of the mine permit application, it has been determined that sufficient information was provided with the permit application to make a completeness determination. LQD is currently conducting the technical phase of the permit application review. The review will be conducted in full compliance with the provisions of the EQA and the LQD rules and regulations. You can be assured that all parties will be able to provide comments during the public notice and comment period. We are working closely with the Attorney General's office regarding surface ownership as it applies to mine permit applications.

Alan

On Tue, Mar 3, 2015 at 4:32 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Mr. Edwards,
>
> Please see the attached letter. A hard copy will come in the mail.
>
> Thanks, Shannon
>
> Shannon Anderson
>
> Powder River Basin Resource Council
>
> 934 N. Main St., Sheridan, WY 82801
>
> 307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
Office: 307-777-7062
Alan.Edwards@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Shannon Anderson
To:	Alan Edwards; sanderson@powderriverbasin.org
Cc:	Carol Bilbrough; Mark Rogaczewski; andrew kuhlmann
Subject:	RE: letter re Ramaco Brook Mine permit application
Date:	Tuesday, March 31, 2015 9:18:54 AM

Thanks for the reply, Alan. As you might guess, this is an issue that we will be following closely. As the letter states, surface owner consent is something our organization takes very seriously. Best, Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Monday, March 30, 2015 8:20 PM
To: Shannon Anderson
Cc: Carol Bilbrough; Mark Rogaczewski; andrew kuhlmann
Subject: Re: letter re Ramaco Brook Mine permit application

Again, my apologies for the delay in my response.

First, a couple of general comments:

1. The Environmental Quality Act (EQA) and the Land Quality Division (LQD) rules and regulations do not include provisions for public comment as part of the completeness review for mine permit applications.
2. The Department of Environmental Quality (DEQ) does not accept e-mail comments for public input during public notice and review on permit related activities,.

Regarding the Ramaco Brook Mine permit application, LQD is aware that there is a dispute regarding surface ownership. For the purposes of the completeness review of the mine permit application, it has been determined that sufficient information was provided with the permit application to make a completeness determination. LQD is currently conducting the technical phase of the permit application review. The review will be conducted in full compliance with the provisions of the EQA and the LQD rules and regulations. You can be assured that all parties will be able to provide comments during the public notice and comment period. We are working closely with the Attorney General's office regarding surface ownership as it applies to mine permit applications.

Alan

On Tue, Mar 3, 2015 at 4:32 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Dear Mr. Edwards,

Please see the attached letter. A hard copy will come in the mail.

Thanks, Shannon

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
Office: 307-777-7062
Alan.Edwards@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Bj Kristiansen; Stacy Page
Subject: Fwd: letter re Ramaco Brook Mine permit application
Date: Tuesday, March 31, 2015 11:42:09 AM

FYI
---------- Forwarded message ----------
From: **Shannon Anderson** <sanderson@powderriverbasin.org>
Date: Tue, Mar 31, 2015 at 9:18 AM
Subject: RE: letter re Ramaco Brook Mine permit application
To: Alan Edwards <alan.edwards@wyo.gov>
Cc: Carol Bilbrough <carol.bilbrough@wyo.gov>, Mark Rogaczewski <mark.rogaczewski@wyo.gov>, andrew kuhlmann <andrew.kuhlmann@wyo.gov>

Thanks for the reply, Alan. As you might guess, this is an issue that we will be following closely. As the letter states, surface owner consent is something our organization takes very seriously. Best, Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Monday, March 30, 2015 8:20 PM
To: Shannon Anderson
Cc: Carol Bilbrough; Mark Rogaczewski; andrew kuhlmann
Subject: Re: letter re Ramaco Brook Mine permit application

Again, my apologies for the delay in my response.

First, a couple of general comments:

1. The Environmental Quality Act (EQA) and the Land Quality Division (LQD) rules and regulations do not include provisions for public comment as part of the completeness review for mine permit applications.
2. The Department of Environmental Quality (DEQ) does not accept e-mail comments for public input during public notice and review on permit related activities,.

Regarding the Ramaco Brook Mine permit application, LQD is aware that there is a dispute regarding surface ownership. For the purposes of the completeness review of the mine permit application, it has been determined that sufficient information was provided with the permit application to make a completeness determination. LQD is currently conducting the technical phase of the permit application review. The review will be conducted in full compliance with the provisions of the EQA and the LQD rules and regulations. You can be assured that all parties will be able to provide comments during the public notice and comment period. We are working closely with the Attorney General's office regarding surface ownership as it applies to mine permit applications.

Alan

On Tue, Mar 3, 2015 at 4:32 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Dear Mr. Edwards,

Please see the attached letter. A hard copy will come in the mail.

Thanks, Shannon

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

--

Alan Edwards

Deputy Director

Administrator, Abandoned Mine Lands

Office: 307-777-7062

Alan.Edwards@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: andrew kuhlmann; andrew kuhlmann
Subject: Notification: LQD - Ramaco 1st review deadline @ Fri Apr 3, 2015 (Andrew Kuhlmann)
Date: Thursday, April 02, 2015 4:43:37 PM

LQD - Ramaco 1st review deadline

more details »

When Fri Apr 3, 2015

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew

Calendar Andrew Kuhlmann

Who
- andrew kuhlmann - organizer

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for notifications on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From: Alan Edwards
To: andrew kuhlmann
Subject: Fwd: letter re Ramaco Brook Mine permit application
Date: Thursday, April 02, 2015 6:56:05 PM

Sent from my iPhone

Begin forwarded message:

From: "Shannon Anderson" <sanderson@powderriverbasin.org>
Date: March 31, 2015 at 9:18:45 AM MDT
To: "'Alan Edwards'" <alan.edwards@wyo.gov>
Cc: "'Carol Bilbrough'" <carol.bilbrough@wyo.gov>, "'Mark Rogaczewski'" <mark.rogaczewski@wyo.gov>, "'andrew kuhlmann'" <andrew.kuhlmann@wyo.gov>
Subject: RE: letter re Ramaco Brook Mine permit application
Reply-To: <sanderson@powderriverbasin.org>

Thanks for the reply, Alan. As you might guess, this is an issue that we will be following closely. As the letter states, surface owner consent is something our organization takes very seriously. Best, Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Monday, March 30, 2015 8:20 PM
To: Shannon Anderson
Cc: Carol Bilbrough; Mark Rogaczewski; andrew kuhlmann
Subject: Re: letter re Ramaco Brook Mine permit application

Again, my apologies for the delay in my response.

First, a couple of general comments:

1. The Environmental Quality Act (EQA) and the Land Quality Division (LQD) rules and regulations do not include provisions for public comment as part of the completeness review for mine permit applications.
2. The Department of Environmental Quality (DEQ) does not accept e-mail comments for public input during public notice and review on permit related activities,.

Regarding the Ramaco Brook Mine permit application, LQD is aware that there is a dispute regarding surface ownership. For the purposes of the completeness review of the mine permit application, it has been determined that sufficient information was provided with the permit application to make a completeness determination. LQD is currently conducting the technical phase of the permit application review. The review will be conducted in full compliance with the provisions of the EQA and the LQD rules and regulations. You can be assured that all parties will be able to provide comments during the public notice and comment period. We are working closely with the Attorney General's office regarding surface ownership as it applies to mine permit applications.

Alan

On Tue, Mar 3, 2015 at 4:32 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Dear Mr. Edwards,

Please see the attached letter. A hard copy will come in the mail.

Thanks, Shannon

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

--

Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
Office: 307-777-7062
Alan.Edwards@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Alan Edwards
To: Keith Guille
Bcc: Alan.edwards@wyo.gov
Subject: Fwd: letter re Ramaco Brook Mine permit application
Date: Thursday, April 02, 2015 6:57:41 PM

FYI

Sent from my iPhone

Begin forwarded message:

From: "Shannon Anderson" <sanderson@powderriverbasin.org>
Date: March 31, 2015 at 9:18:45 AM MDT
To: "'Alan Edwards'" <alan.edwards@wyo.gov>
Cc: "'Carol Bilbrough'" <carol.bilbrough@wyo.gov>, "'Mark Rogaczewski'" <mark.rogaczewski@wyo.gov>, "'andrew kuhlmann'" <andrew.kuhlmann@wyo.gov>
Subject: RE: letter re Ramaco Brook Mine permit application
Reply-To: <sanderson@powderriverbasin.org>

Thanks for the reply, Alan. As you might guess, this is an issue that we will be following closely. As the letter states, surface owner consent is something our organization takes very seriously. Best, Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Monday, March 30, 2015 8:20 PM
To: Shannon Anderson
Cc: Carol Bilbrough; Mark Rogaczewski; andrew kuhlmann
Subject: Re: letter re Ramaco Brook Mine permit application

Again, my apologies for the delay in my response.

First, a couple of general comments:

1. The Environmental Quality Act (EQA) and the Land Quality Division (LQD) rules and regulations do not include provisions for public comment as part of the completeness review for mine permit applications.
2. The Department of Environmental Quality (DEQ) does not accept e-mail comments for public input during public notice and review on permit related activities,.

Regarding the Ramaco Brook Mine permit application, LQD is aware that there is a dispute regarding surface ownership. For the purposes of the completeness review of the mine permit application, it has been determined that sufficient information was provided with the permit application to make a completeness determination. LQD is currently conducting the technical phase of the permit application review. The review will be conducted in full compliance with the provisions of the EQA and the LQD rules and regulations. You can be assured that all parties will be able to provide comments during the public notice and comment period. We are working closely with the Attorney General's office

regarding surface ownership as it applies to mine permit applications.

Alan

On Tue, Mar 3, 2015 at 4:32 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Dear Mr. Edwards,

Please see the attached letter. A hard copy will come in the mail.

Thanks, Shannon

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

--

Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
Office: 307-777-7062
Alan.Edwards@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Bj Kristiansen; David Myers
Subject:	Brook Mine area CIR Images - May 1975
Date:	Friday, April 03, 2015 12:46:30 PM
Attachments:	Brook_Mine_Area_1975_CIR_Image.zip image.png

Bj and Dave,

We have a bunch of older aerial images from the coal mines tucked away in a drawer here. I scanned and georeferenced two May 1975 color infrared images that show the area of the Brook Mine and Big Horn Mine (attached zip file). The image came out a little grainy from the scan but it does give a good view on irrigated areas, as well as the disturbance at the Big Horn Mine at that time and the Hidden Water Pits before they were reclaimed.

I noticed that the images look better if you right-click each layer in ArcMap and change the "Stretch Type" to "None". (see screen grab below).

Matt

Inline image 2

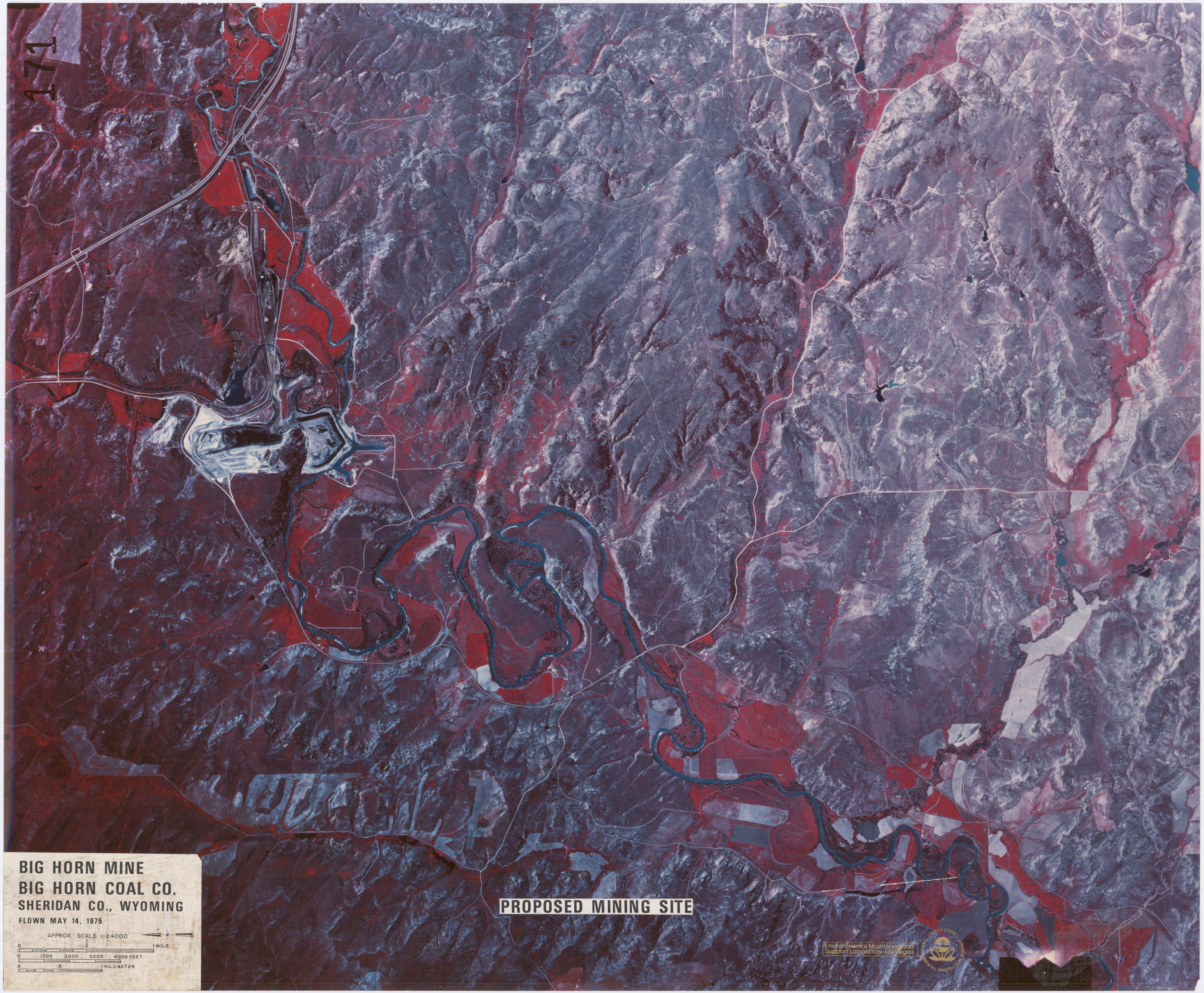
Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment bighorn_1975cir.JGwx (142 Bytes) cannot be converted to PDF format.

171



BIG HORN MINE
BIG HORN COAL CO.
SHERIDAN CO., WYOMING

FLOWN MAY 14, 1975

APPROX. SCALE 1:24000

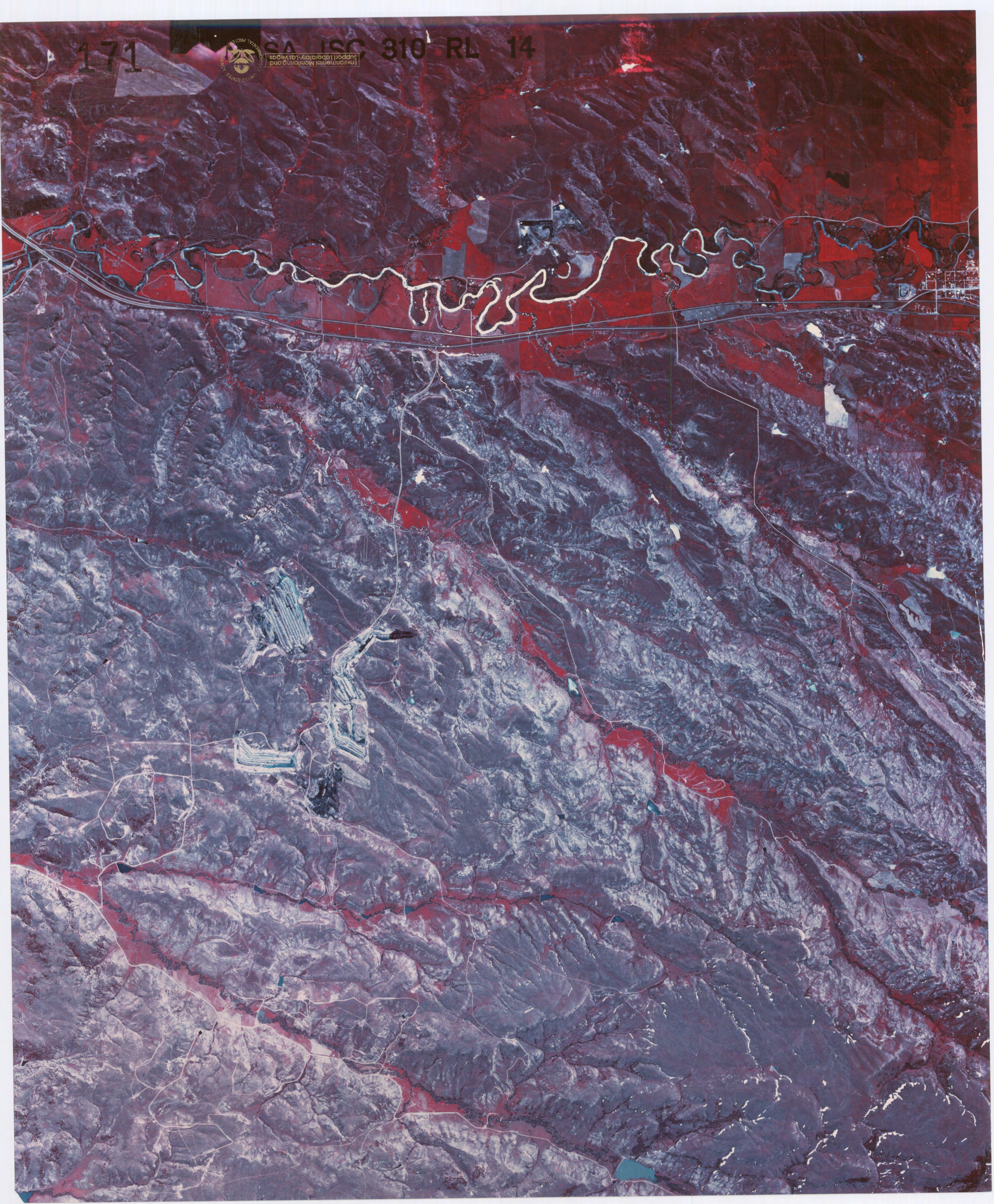
0 ½ 1 MILE

0 1000 2000 3000 4000 FEET

0 .5 1 KILOMETER

Attachment bighorn_1975cir.JPG.aux.xml (3818 Bytes) cannot be converted to PDF format.

Attachment brookmine_area.JGwx (142 Bytes) cannot be converted to PDF format.


171
SA ISC 310 RL 14
Environmental Monitoring and
Support Laboratory-Las Vegas

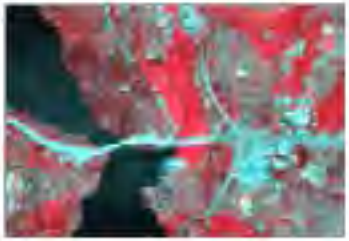
Attachment brookmine_area.JPG.aux.xml (3280 Bytes) cannot be converted to PDF format.

Layer Properties

General | Source | Key Metadata | Extent | Display | Symbology

Show:

- Stretched
- RGB Composite



About symbology

Draw raster as an RGB composite

Channel	Band
☑ Red	Band_1
☑ Green	Band_2
☑ Blue	Band_3
☐ Alpha	Band_1

☐ Display Background Value:(R, G, B) 0 0 0 as

Display NoData as

Stretch

Type: None Histograms...

☐ Invert

☑ Apply Gamma Stretch: 1.31789 1.31789 1.31789

Statistics From Each Raster Dataset

Red | Green | Blue

OK Cancel Apply

From:	David Myers
To:	Matthew Kunze
Cc:	Bj Kristiansen
Subject:	Re: Brook Mine area CIR Images - May 1975
Date:	Monday, April 06, 2015 11:43:04 AM
Attachments:	image.png

Thanks Matt, that's a good find.

Dave

David J. Myers
Natural Resources Analyst
WDEQ / LQD District III
2100 West 5th St.
Sheridan, WY 82801
(307) 675-5614

On Fri, Apr 3, 2015 at 12:45 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Bj and Dave,
>
> We have a bunch of older aerial images from the coal mines tucked away in a drawer here. I scanned and georeferenced two May 1975 color infrared images that show the area of the Brook Mine and Big Horn Mine (attached zip file). The image came out a little grainy from the scan but it does give a good view on irrigated areas, as well as the disturbance at the Big Horn Mine at that time and the Hidden Water Pits before they were reclaimed.
>
> I noticed that the images look better if you right-click each layer in ArcMap and change the "Stretch Type" to "None". (see screen grab below).
>
> Matt

Inline image 2

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

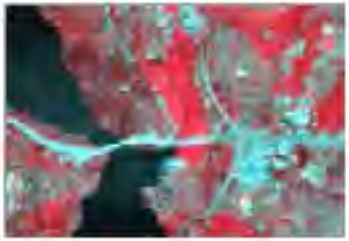
E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

Layer Properties

General | Source | Key Metadata | Extent | Display | Symbology

Show:

- Stretched
- RGB Composite



About symbology

Draw raster as an RGB composite

Channel	Band
☑ Red	Band_1
☑ Green	Band_2
☑ Blue	Band_3
☐ Alpha	Band_1

☐ Display Background Value:(R, G, B) 0 0 0 as

Display NoData as

Stretch

Type: None Histograms...

☐ Invert

☑ Apply Gamma Stretch: 1.31789 1.31789 1.31789

Statistics From Each Raster Dataset

Red | Green | Blue

OK Cancel Apply

From: BJ Kristiansen
To: jbarron@wwcengineering.com
Subject: Brook Mine round 1 comments - Word files
Date: Monday, April 20, 2015 8:42:40 AM
Attachments: a round 1 cover.docx
andrew round 1.docx
bj round 1.docx
boomgaarden2.pdf
Dave M round 1.pdf
dave s round 1.docx
doug round 1.docx
GnF round 1.docx
jaime round 1.docx
kim round 1.docx
matt AVF round 1.docx
matt SW round 1.docx
Muthu round 1.docx
stacy round 1.docx
wer0273.01b_Signed Letter.pdf
image001.jpg

Here they are. The PDF files are the only format available.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

April 2, 2015

Mr. Randall Atkins
RAMACO Wyoming Coal Company, Inc.
1101 Sugarview Drive
Sheridan, WY 82801

RE: Round 1 Technical Review, Brook Mine Coal Mine Permit Application, TFN 6 6/025

Dear : Mr. Atkins

The Land Quality Division received your application for a Permit to Mine Coal on October 30, 2014 and it was reviewed for technical completeness on the same day. On November 4, 2014 the application was deemed technically complete. The document has now been reviewed in its entirety and comments, questions, noteworthy deficiencies, and requests for additional information were generated. These have been gathered by the permit coordinator and are presented as attachments to this letter.

There are a large number of comments in this first round due to the nature of the permit application. The permitting process has become more refined since the last coal mining permit was issued in Wyoming and reviews today have a greater degree of sophistication. In some cases, different reviewers have similar comments in areas where their reviews overlap. These were reviewed by the permit coordinator and modified to be less duplicative, where possible.

Please review the First Round evaluation comments and prepare your replies accordingly. When you have completed the Round I assessment of our commentaries, send your responses to the LQD office in Sheridan to begin the Round II Technical Evaluation. Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round I materials. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III

Cc: Cheyenne LQD files

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

MEMORANDUM

TO: File, Brook Mine Permit Application, TFN 6 6/025

RE: Comments on ADJUDICATION, B.H.C. 1-3, Warranty Deed, July 27, 1954

FROM: Wyoming Attorney General's Office

DATE: April 1, 2015

The Land Quality Division has determined that this Application is deficient and is not yet technically adequate and suitable for publication regarding the requirements of Wyoming Statutes § 35-11-406(a)(ii) and (b)(xi)-(xii), and Chapter 2, Section 2 of the Division's rules and regulations for coal operations. In order for the Division to determine whether the Application meets these requirements, the Division needs the Applicant to address the following issues:

1. On March 9, 2015, the Division received a letter from attorney, Lynne Boomgaarden, on behalf of her client, Big Horn Coal Company. The letter described Big Horn Coal Company's concerns with the Application. Near the bottom of the second page, the letter states: "The extent of Brook Mining's right to use BHC surface lands under the 1954 deed currently is being litigated pursuant to a Declaratory Judgment Complaint filed by Brook Mining in *Brook Mining Company, LLC v. Big Horn Coal Company*, Civil Action No. CV 2014-372, and will be determined by the Fourth Judicial District Court for Sheridan County, Wyoming." A copy of that letter is included with these comments.

Chapter 2, Section 2(a)(iii) of the Division's coal rules states, "The right of entry statements and documents required by W.S. § 35-11-406(a)(ii) and (b)(xi) shall clearly explain and support the legal rights claimed by the applicant and shall also include whether that right is the subject of pending litigation[.]" In the spirit of that provision, the Division asks the Applicant to provide information about the case referenced in Big Horn Coal Company's letter and any similar pending litigation. At a minimum, the Division requests a summary of the circumstances that led to the case, the factual and legal questions at issue, and the case's current status. Please also provide copies of the complaint and the answer. If there are any motions that the court has ruled on limiting or deciding any of the claims or factual or legal questions originally at issue in the case, please also provide copies of the orders, the motions, the responses to the motions, and any supporting memoranda.

2. The Adjudication section of the Application includes copies of the deeds and surface access agreements and consent forms that the Applicant believes satisfy the requirements of W.S. § 35-11-406(a)(ii) and (b)(xi)-(xii), and Chapter 2, Section 2(a) of the Division's rules. However, the Application does not contain access agreements or consent forms for two surface owners within the permit area, Padlock Ranch Company and Big Horn Coal Company. In order to determine the Application's compliance with the statutory and regulatory requirements, the Division needs to be able to determine whether W.S. §§ 35-11-406(b)(xi) or -406(b)(xii) apply to this Application. Therefore, the Division requests the Applicant to provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch Company and Big Horn Coal Company are or are not "residential or agricultural landowners" under the statutory definition in W.S. § 35-11-406(b)(xi).

MEMORANDUM

TO: File, Brook Mine Coal Mine Permit Application, TFN 6 2/025

FROM: Bj Kristiansen, PG, Natural Resources Program Principal

DATE: March 6, 2015

RE: Brook Mine application review of Adjudication, Land Use, History, Climatology, Topography, Geology, Overburden Assessment, Hydrology, Alluvial Valley Floors, Mine Plan, and Reclamation Plan

---

My review of the Brook Mine Coal Mine Permit Application is complete. My comments, critique, and perceived deficiencies are as follows:

LOCATION IN DOCUMENT	COMMENTS
	Appendix D1, Land Use
Table D1. 3-1	1) It is unnecessary to list the Expired Permit category of gas well permits. Since these APDs have expired without completion there is no related activity to the site. Listing of a non-event is not required. This also applies to the NO category since this indicates that the APD was refused, thus never became permitted through WOGCC.
	Appendix D2, History
	2) There are no comments for this section of the application. The narrative is well written and comprehensive.
	Appendix D4, Climatology
	3) General comment – Is there no data for climatology that is more recent than 1990? It exists, therefore needs to be represented. Please locate and include the most recent climatological data. Twenty year-old data bears little resemblance to Sheridan County climate today so characterization of the present climate with a 20 year gap is problematic. Please reevaluate the data in light of locating and use more recent information.
Section D4.2.6	4) Why was 65°F used as the baseline temperature? Also, why were the high and low temperatures set to 86°F and 50°F respectively? Please clarify.

Figure 4.2-11	5) Are the degree days the total number of days that match the data points for the entire period from 1961 through 1990? This indicates that the data represented along the Y axis covers a period of 30 years on a daily basis. Please clarify.

Appendix D5, Topography, Geology, and Overburden Assessment

Section D5.4.1	6) Paragraph 2 refers to "marginally suitable Selenium levels" as defined in LQD Guideline No.1. Guideline 1 has two separate sets of chemical quality criteria tables. Appendix 1 occurs on pages 17-21 as well as on pages 38-43. The first set of tables have been superseded by the second set of tables. Please use the tables on pages 38-43 when determining material suitability. The first Appendix 1 is being removed from the guideline. The newer tables define the Selenium target as follows: Suitable < 0.3 ppm Marginal 0.3 – 0.8 ppm Unsuitable > 0.8 ppm (dependent on premining water quality and overburden quality) These values are established for uplands and ephemeral drainages unless it can be shown that Selenium impregnated materials will be buried above the groundwater potentiometric surface and below the reclaimed surface root zone. Other quality criteria have not changed.
Figure D5.3-2	7) What units are expressed in the figure as the %g? Please include a footnote clarifying the measurement parameter.
Addendum D5-1	8) Are the Northings and Eastings in State Plane coordinates? It is assumed that they are but please verify this. The title at the top of the page could read **Drill Hole Tabulations (State Plane Coordinates)**
Addendum D5-2	9) Please rearrange the Lithologic and Electric logs in such a way that the Electric log immediately follows the Lithologic log. This allows for a more comprehensive examination of the data. 10) Holes R12-000 through R12-020 have the Northings and Eastings reversed. Please correct. 11) The Lithologic logs with the AMBRE designation 02, 03, and 04 do not have coordinates or elevations. Please provide coordinates and elevations for these three holes. 12) Hole R13-018 appears to have erroneous coordinates. The Northing is listed as 11,941,802. It should probably be 1,941,802. The elevation is shown as 43,887.9, where it should probably be closer to 3,887.9. Please verify and correct. Hole R13-024 has a very high Northing at 61,941,541 and elevation at 73,885.4. These may be 1,941,541 and 3,885.4, respectively. Please verify and correct

	13) A suggestion for future exploration: Ask the geophysical logger to reduce the gain on the gamma logs. The readjustment bounce on the logs makes them a bit difficult to read and interpret.
Addendum D5-5, Pg. D5-5-4	14) The splitting tensile strength tests were run on four (4) samples from two (2) holes representing roof, coal, and floor conditions. a) Why were these locations used as representative of the lithologies encountered during mining? b) Are these few samples representative of all conditions expected to be encountered by the continuous miner (CM)? Please elaborate and clarify the narrative. A statement **must** be made that strength testing will be performed on at least one set of samples per mining panel prior to use of the CM to insure that conditions are favorable for roof retention without subsidence. Lithology in this area is inconsistent and rock strength can vary accordingly. Using the data provided on the four samples tested indicates that some of the overburden from hole R13-19 is unsuitable for highwall mining, based on the CAT® Site Evaluation Tool For Highwall Miners; (http://webtools.cat.com/globalmining/highwallminers/index.html).
Addendum D5-4, Exhibits 1 – 7	15) Please include the drill hole locations on these isopach maps.
Exhibit 8	16) The map labeled as the isopach map of the Lower Masters bed is a contour of a surface. Please replace the contour map with the appropriate isopach map
	Appendix D6, Hydrology
Section D6.2.3, Pg. D6-20	17) Narrative in the last paragraph – why were no samples taken in Hidden Water Creek? Please explain.
Table D6.1-8	18) Regarding the HEC-RAS modeling results – The values for Hidden Water Creek and Slater Creek are identical. Is this accurate or is it a typographical error? Please clarify.
Addendum D6-7	19) The well construction summary sheets need to have the coal bed names listed on the well lithology sections to the right of the well diagrams. Please label accordingly.
Attachment D6-8-A, Pg. D6-8-20	20) A statement is made that water within both coal seams is expected to be "high quality" and "good" water. Please define the meaning of those characterizations. Are these judgments based on MCLs or some other value? Are they being classified

	by some constituent values? Or is there another metric being used? Please clarify. For example; referencing WQD R&R, Chapter 8, Table I, Class I,II, or III would better define the essential characteristics of the water quality. Numerical values of critical constituents, such as TDS, could also serve to define the quality as "good". More descriptive qualifiers are needed to judge the water quality.
Attachment D6-8-E, Hydrographs	21) The x parameter, time, is depicted in days. It appears that this scale should have been adjusted to show time in hours due to the rapid changes seen in the hydrographs. Please use a finer scale for the x axis.
Attachment D6-8-F	22) The above mentioned comment can also be applied to the Carney well hydrographs. Please adjust the x axis to hours.
Addendum D6-9, Pg. D6-9-2	23) Please include a column in Table D6-1 that indicates the elevation of the bottom of the well or TD. The total water column is important when assessing groundwater characteristics. Please correct.
Addendum D6-10, Pgs. D6-10-28 through D6-10-53	24) On the sample analysis reports, Please provide a brief narrative at the beginning of the lab results to give context to the data. Footnotes on the pages refer to MCLs or other parameters of water quality used for classification. However, the context that is used to define these parameters is missing. The assumption is made that these quality values are derived from the WQD R&R, Chapter 8, Table I definitions. But that is uncertain as no frame of reference is given. A brief sentence or two at the beginning of the section would clarify the numerical standards used in the report. Please adjust the narrative accordingly. 25) Please include the lithology of the sampled zone, either in the sampling information sheets, or on the sample analysis reports. Identification of the lithology sampled needs to be readily available with the analysis. This applies to all increments sampled. The sampled zones do have identification on the sample sheets with a shorthand nomenclature but persons unfamiliar with the lithology of the prospect area would be at a disadvantage when evaluating the sample results. A simple reference table at the beginning of the section would be sufficient. Foe example; MST=Masters, CRN=Carney, AL=Alluvium. Non-geologists need some frame of reference. Please create a clarifying narrative.
	Appendix D11, Alluvial Valley Floor
Section D11.1	26) RAMACO has requested LQD to make a determination on the nature of the drainages as potential AVF within the permit boundary as well as within ½ mile of the permit boundary. This

would then entail analysis of the following drainages (distances are approximations):

- Hidden water Creek – all (4 mi.)
- East Fork Earley Creek – lower 1 mile
- Slater Creek – lower 3 miles
- Tongue River – ½ mi. east of Interstate 90 and 4 mi. west of Interstate 90 at the Acme exit.

Prior to such a declaration, LQD staff will have to perform a variety of assessments designed to assist us in making a declarative statement about AVF classification. An AVF declaration will be made after in-depth study of the drainages. Such investigation will consist of, but not be limited to:

1. Field evaluation of the geomorphic and lithologic character of the drainages in question;
2. Determination of the agricultural characteristics of the stream course;
3. Examination of available bore hole logs that can be used to characterize the subsurface materials beneath the valley floor;
4. Determination of groundwater and surface water characteristics, both quantitative and qualitative, within the drainages in question;
5. Other evaluation processes that may be deemed necessary should initial findings warrant further, in-depth analyses.

Addendum D11-3

27) Some of the borehole and well logs indicate a damp or wet interval encountered during drilling. Was an attempt made to allow wet materials to produce water prior to continuation of the hole or was water noted after adding another drill steel and lowering the kelly to begin the next 20 feet of hole? Typically, after the steel has been added and the compressor is engaged, a small amount of water can be air-lifted before the rotary table begins to turn. If so, are there field notes indicating water was observed during the connection?

Volume 11, Mine Plan

Section MP.1.2.1, pg. MP-4

28) Tunnel and pillar widths are discussed in general terms. Please approximate a range for the widths, in feet, in the narrative to give context to the discussion.

29) The fifth sentence, beginning with "To minimize the amount of exposure..." does not make sense. Please rewrite the sentence for clarity.

30) The narrative also references figure MP.1-3 as a general schematic of the highwall mining operation. The figure depicts significant vertical highwalls above the mining operation. The text mentions that the highwalls will be vertical where the

Masters and Carney converge but the illustration depicts conditions where the coal seams appear to be separated by a considerable thickness of parting. It is our experience that vertical highwalls in the Powder River Basin are unstable and should be discourage wherever possible. What would the maximum thickness of burden approximate where the vertical highwalls will exist? Please include an average on the schematic as has been done for pit width and bench width.

Pages MP-3 and MP-4

31) These pages describe the highwall mining operation in vague generalities. The narrative states that the continuous miner will advance into the working face to a depth of 2,000 feet. The manufacturer's specifications for the ADDCAR system state that the depth of a cut is 1,600 feet. Is this a discrepancy of 400 feet or is there a difference in mining tools and the ADDCAR system comes with multiple depth capacities. Please clarify.

32) A general word of guidance – Ramps are mentioned in the narrative as designed to an 8% grade. The Cat 777 can generally handle this grade fairly well under most conditions. The Mack Titan trucks, however, may be problematic under certain conditions. Entering the pit on the ramp could be difficult for the Mack trucks with pups if the ramp has been watered to control dust. The overburden materials used for ramp systems are generally silty with a clay matrix and overwatering can create slipping hazards for vehicles. A truck with multiple trailers will have difficulty navigating these conditions. A 6% ramp under these situations is strongly advised.

33) The narrative describes the tunnel width as variable, depending on the cutting head chosen. Please indicate approximate footages of the tunnel widths. For example, Bucyrus and Joy manufacture continuous miners that have heads ranging from 11 to 12 feet in width. A mention of those widths would clarify the narrative. Also the protective coal pillars are described but have no dimensions indicated. The pillar width to tunnel width is crucial so an approximation of the remnant pillars width in feet is required. Please include approximate widths for tunnel and pillar widths.

Section MP.1.2.2

34) The dozer push method of overburden removal is not adequately described. Though Figure MP.1-4 does depict the dozer push materials to some extent, the overlapping nature of the multiple lift system can be confusing to some. The narrative on page MP-4 is too brief. Please elaborate further on the dozer push staging and overburden removal. Perhaps an illustration that depicts the dozer removal in stages would be more appropriate. This can be accomplished by creating a series of

	illustrations rather than only one. Please clarify the methodology.
Section MP.1.4, Pg. MP-5	35) The last sentence does not make sense. Please rewrite the sentence.
Section MP.4.2.3, Pg. MP-15	36) The discussion of temporary topsoil stockpiles describes creating a ring ditch around the topsoil pile if there is a potential for water erosion during the 2 week to 6 month life of the pile. Since the climate is unpredictable and subject to rapid changes, temporary topsoil stockpiles (2 weeks to 6 months) will be required to have ring ditches in all cases with no qualifiers. LQD writes more violations concerning inadequate topsoil practices than any other issue. Rewrite the narrative to indicate that all temporary topsoil stockpiles will have a ring-ditch and berm created for piles having a life of 2 weeks or more. Keep in mind that even a short-lived topsoil stockpile could generate a violation if a sudden rainstorm were to erode the soil and waste it on the surrounding terrain. RAMACO may want to allow for this as well.
Section MP.4.3.4, Pg. Mp-17	37) A swell factor of 16% is being used to convert bank cubic yards to loose cubic yards. The number was generated from information attained from Big Horn Coal (PT213). Where was this information located? Many of the coal mines in the northwestern corner of the Powder River Basin use a swell factor of 13% - 14% since the overburden material is finer grained, with a higher clay content than mines on the eastern margin of the basin. Please cite the use of a 16% swell factor.
Section MP.6.1, Pg. MP-39	38) The second paragraph discusses surface runoff attenuation during mine years 4 and 5. The peak flow rates for precipitation events will be attenuated by the mining trenches that lie perpendicular to the flow in the local drainages. What flow events are expected to be attenuated by the trenches? Will the 2 year, 10 year, or 100 year events be considered as an average event? Please modify the narrative, in general terms, to define which precipitation event will be used when designing the pit drainage plans.
Section MP.8, Pg. MP-47	39) The narrative mentions that potable water will be hauled to the mine an placed in a cistern. Why is a cistern system being considered for potable water instead of a reverse osmosis unit? The local residents use such systems as do the mines. How large of a cistern will be used for water storage? Please modify the narrative to expand on the rational behind using a cistern.

Section MP.9.9, Pg. MP-52	40) When pre-dug mud pits are to be used for exploration drilling, the topsoil must be protected from contamination by removal and stockpiling. The pit location must be stripped to the base of the soil with an areal extent that allows the pit materials to be stacked as spoil without encroaching on native surface. Reclamation shall occur in a manner that will best restore the surface to its pre-disturbance condition. These contingencies need to be better described in the narrative. Please modify the text to reflect the aforementioned conditions.
Section MP.18, Pg. MP-68	41) The second paragraph discusses the speed limits that will be set on haulroads to protect wildlife. Approximately what speed limits will be used?
Section MP.20, Pg. MP-69	42) The brief description of underground mining should state that no "conventional" underground mining will occur. Highwall coal recovery is an underground mining technique, but no personnel work underground. Thus the mining is modified underground mining.
Section MP.24, Pg. MP-70	43) The word "Operation" is misspelled in the title (OPERTATION).
Section MP.25, Pg. MP-71	44) The second paragraph, third sentence, discusses requiring additional permitting. The word "additional" is misspelled (addidtional).
TABLE MP.1-1	45) The total disturbance should read 895 acres, not 775. Please correct the table.
FIGURE MP.1-3	46) The average width of the pit floor and safety bench have average widths indicated on the drawing. Please insert the average heights of the vertical highwalls in these situations.
FIGURE MP.1-4	47) The cross section, as drawn, is confusing. It would appear that dozer pushed, loose material significantly exceeds the bank material available in the highwall. The figure is not drawn to scale but a more accurate attempt to represent dirt volumes would be appreciated. Also, the cross section itself does not make sense in the way that operational steps are illustrated. A series of cross sections over time would be much more beneficial to define the appearance of the dozer push. Please modify the figure accordingly. A sample of an idealized schematic is attached. It is volumetrically accurate.
FIGURE MP.4-3, Pg. MP-F7	48) What is the narrow, vertical rectangle located in the center of the coal stockpile coming from the stacker?
Addendum MP-3, Pg. MP-3-2	49) The introductory paragraph states that the Brook Mine is approximately 6 miles northwest of Sheridan, Wyoming. However, in earlier narrative, the mine is said to be 6 miles south

of the Montana border and 8 miles northwest of Sheridan. This passage is found in the Land Use Appendix D1-1. The distances should be uniform in all instances throughout the narrative.

(Cross Section insert follows)

Section 2.3, 50) Figures 2.3-1 and 2.3-2 show the potentiometric surfaces for the Carney and Masters coal beds. The contours daylight and appear to be in mid-air over the Slater Creek drainage. Please adjust the contours so they terminate at the outcrop.

Addendum MP-6

Section MP-6.1, Pg. MP-6-3 51) The second to last paragraph indicates that the depth of the penetration by the continuous miner will be 2,000 feet. Is this an approximation since the listed depth for the ADDCAR device is 1,600 feet. Please clarify the discrepancy.

Section MP-6.1, Pg. MP-6-4 52) The discussion in this sections centers around the necessity of maintaining a straight, even cutting depth to prevent pillars from being cut too narrow to hold up the roof material and allow subsidence. The 1:1 ratio suggested by NIOSH is acceptable as long as roof strength tests bear up (no pun intended) the use of the general guidelines. A small sample of tests have been run on roof and coal rock intervals and those tests have been reported. LQD requests a narrative placed either in this location of the text or other location of RAMACO's choosing that discusses the strength tests results as it pertains to roof stability. Also, a commitment must be made in the document to sample roof material for strength testing for at least one location in every panel that will mined by the continuous miner prior to mining. Our concern rests with the competence of the overlying lithologies and their possibility for subsidence. This has been a problem in this area for decades and care must applied to characterize roof materials accurately.
A sampling plan to test compressive strength above each coal panel must be submitted prior to permit approval.

53) Please provide the data used as input for the ARMPS-HWM program.

FIGURE MP-6.2-2 54) The scale of the photograph is too large to adequately depict the zones of surface subsidence from the old underground mines. Please blowup the scale to allow for clear visibility of the subsidence.

FIGURE MP-6.2-3 55) This figure is very effective. It clearly shows the subsidence evident on the air photo as it correlates to the old underground map superimposed on it. One problem, though, is that the air photo base needs to be darker, with greater contrast. The photo is a bit washed out and manipulation of the brightness/contrast aspects of the photo would help its visibility greatly. Please recalibrate the photo tonality.

Addendum MP-8 Section MP-8.5.4	56) The last sentence in this section indicates that there is no suitable habitat available for the Northern Long-Eared Bat. Does this include the climax Cottonwood Forest along Tongue River? The well developed understory along the river is suitable for Long-eared bat habitation though none have been located in this area. Or does the negation of the existence of the bat only apply to the area in the hills above the river where the mining will occur. Please clarify the area that was considered for potential Long-Eared Bat occurrence.
	Volume 12, Reclamation Plan
Section RP.8.3, Pg. RP-37	57) The narrative describes the sources of recharge to the coal seams. One lithology mentioned as a positive recharge contributor is the overlying burn, scoria, or clinker material, generated by coal fires. It is a common misunderstanding that the scoriaceous material recharges coal or overburden. It would appear, at first glance, that the broken, vuggy material would be capable of conveying large amounts of water from the surface to materials beneath. That is not the case, however, as the coal/scoria interface has a zone of partially metamorphosed coal ash that lies between the burned material and the remnant coal. I have seen this zone many times during my 25 year career in the coal mines when supervising coal and overburden removal. This zone is characterized by a white to light gray, clay band that ranges in thickness from 6 inches to a foot or more. It is the same high silica ash found in the bottom ash of the local power plants that burn PRB coal. This ash band acts as an aquaclude, preventing water from entering or escaping the coal. Because of this, any recharge models that were run using the scoria as a recharge source must be reevaluated using new layers that do not include the scoria. Rerun recharge models if needed.
Section RP.8.3, Pg. RP-39	58) The second sentence in the first paragraph has an odd, difficult to understand syntax. Please rewrite the sentence for clarity.
	EXHIBITS
Addendum D5-4, Exhibit 1	59) The title on the map declares that this is an overburden isopach, but the bed name is missing. Please indicate which bed this map pertains to.
Exhibit 8	60) The name of the PDF file for this exhibit indicates that this is an isopach map of the Masters Lower coal bed. The title in the map indicates that this is the contour of the base of the Masters coal seam. Please correct the title of the PDF file.
Addendum D5-6 Exhibit 1	61) We commend RAMACO for sampling overburden locations on 80 acre spacing. There are some gaps in the sampling plan, however, that need to have core holes drilled to fill them. The

	underground Coal Rules and Regulations in Chapter 7, Section 1(a)(i) are specific on ensuring that overburden geology is characterized in all locations where overburden will be removed or subsidence may occur. This essentially means that all areas above the planned coal panels need representative cores drilled to a sufficient density, approximately one hole for every quarter section of affected area. Based on that, The following locations still need to be characterized by overburden sampling: NE1/4, sec.22, T.57N., R.84W. NW1/4, sec.15, T.57N., R.84W. NW1/4, sec.14, T.57N., R.85W. SE1/4, sec.10, T.57N., R.85W.
Exhibit D5.1-1	62) Kudos to the staff member that created this slope analysis map. It is clear and concise and the histogram is very informative. Good job.
Addendum D10 Exhibits	63) The permit boundary layer on all of the exhibits covering the aquatic resource boundaries is incorrect. Please correct the permit boundary layers.
Mine Plan Exhibit MP.1-1	64) The patterns used to depict surface disturbance from year to year are too similar. It is difficult to differentiate between year 0 and year 2, for example. Please recreate the surface disturbance layers to be more unique. The overburden removal sequence map (Exhibit MP.4-4) is a good example.
Reclamation Plan Exhibit RP.6-1	65) The permit boundary on this map is inaccurate. Please recreate the permit boundary layer.
Exhibit RP.8-3 and Exhibit RP.8-4	66) The post mining potentiometric surfaces for the Carney and Masters beds are suspended in mid-air over Slater Creek. Please terminate the contour lines at the outcrop or use a dotted line to indicate the calculated potentiometric surface.

End of comments from Bj Kristiansen.

6 2/025

MR KM DE SP
KR BK LM JM
PS MB DM DS
JJ DL

CROWLEY | FLECK PLLP
ATTORNEYS

Lynne Boomgaarden
237 Storey Boulevard, Ste. 110
Cheyenne, WY 82009
Office: 307-426-4100
Direct: 307-426-4104
Cell: 307-631-1070
lboomgaarden@crowleyfleck.com

March 6, 2015

RECEIVED
MAR 10 2015
DEQ
SHERIDAN

Department of Environmental Quality
Land Quality Division
Attn: Mr. Alan Edwards, Deputy Director and Acting Administrator
122 West 25th Street
Herschler Building
Cheyenne, WY 82002

Re: Concerns Regarding Brook Mining Mine Permit Application and Exploratory Drilling Activity within Big Horn Coal Co. Mine Permit Area: Permit No. 213-T8

Dear Mr. Edwards:

As you are aware, Brook Mining Company, LLC ("Brook Mining")[1] submitted an application for a permit to mine, TFN # 62/025, to the Land Quality Division of the Wyoming Department of Environmental Quality ("DEQ/LQD") on October 31, 2014 ("Brook Mining Application"). My client, Big Horn Coal Company ("BHC")[2], did not consent to the mine plan and reclamation plan that Brook Mining provided to BHC for review because the proposed activities will unreasonably interfere with BHC's extensive surface infrastructure improvements and its existing use and development plans for the area, including but not limited to the exercise of BHC's rights and obligations under its ***existing*** Mine Permit No. 213-T8. As you are also aware, Brook Mining, through its agents, representatives and/or contractors, has recently undertaken drilling activity pursuant to a Coal Notification on surface lands owned by BHC in the N1/2N1/2, Section 21, Township 57 North, Range 84 West. BHC was never notified of, did not consent, and, due to its regulatory obligations under Mine Permit No. 213-T8, strenuously objects to any and all such activity without at least having been provided notice and a plan of operations. This letter serves to document BHC's legal

[1] Brook Mining is the developer and operator of coal and coal mining interests owned by Ramaco Wyoming Coal Co., LLC ("Ramaco").

[2] BHC is wholly owned by AE Coal, LLC and AE Coal LLC is wholly owned by Ambre Energy North America, Inc.

and operational concerns with the Brook Mining mine plan, reclamation plan, permit application adjudication and exploratory drilling activity.

Background

Prior to submission of the Brook Mining Application, AE Coal, LLC, was party to an exploration agreement with Ramaco. That exploration agreement, together with all associated permissions for Ramaco to conduct pilot hole and core drilling and other related mineral exploratory and coal prospecting activities on BHC surface lands, expired by its own terms on July 19, 2014. Also prior to submission of the Brook Mining Application, on March 13, 2013, BHC consented to Ramaco conducting baseline environmental studies and surveys on certain BHC surface lands. Notwithstanding the March 2013 Landowner's Consent Agreement, on April 9, 2013, Ramaco sent a letter to BHC declaring that a 1954 deed between its predecessors and BHC provides Ramaco "the legal right to access the surface land for core drilling, pre-permit monitoring or any other pre mining activities" without any additional approval or consent from BHC. This position starkly differed from Ramaco's course of conduct when submitting its Notice of Intent to Explore for Coal By Drilling to DEQ/LQD (Mr. Mark Taylor) on September 21, 2012, in which it referenced the now-expired July 19, 2012 exploration agreement between AE Coal, LLC and Ramaco.

RECEIVED
MAR 10 2015
DEQ
SHERIDAN

BHC has expressed in writing to Brook Mining its general support of coal mining in the area and, specifically, its support for Brook Mining's proposed mining beneath BHC's surface lands located north of the Tongue River. However, on October 9, 2014, BHC sent a letter to Ramaco confirming that Ramaco's proposed activities on BHC lands south of the Tongue River do not conform to BHC's development plans, that BHC "does not consent to the mining and reclamation plan that is being proposed by the Brook Mine," and that BHC does not agree with Ramaco's assertion that it has the right under the 1954 deed to make reasonable use of BHC's surface lands for mine planning, mining and mine related facilities and activities without surface owner's consent. The extent of Brook Mining's right to use BHC surface lands under the 1954 deed currently is being litigated pursuant to a Declaratory Judgment Complaint filed by Brook Mining in *Brook Mining Company, LLC v. Big Horn Coal Company,* Civil Action No. CV 2014-372, and will be determined by the Fourth Judicial District Court for Sheridan County, Wyoming.[3]

---

[3] In its district court complaint, Brook Mining also reserved the right to condemn BHC's property, including its surface rail and bridge infrastructure. Brook Mining's apparent intent to condemn BHC's existing surface infrastructure is curiously inconsistent with the Brook Permit Application, which proposes to mine under the existing surface infrastructure, thereby rendering that valuable infrastructure useless.

BHC's Surface Owner Rights under W.S. 35-11-406(b)(xii)

DEQ/LQD has no authority to adjudicate property rights disputes. Conversely, the District Court's determination of Brook Mining's rights under the 1954 deed has no bearing on BHC's rights as a non-resident, non-agricultural landowner under W.S. § 35-11-406(b)(xii). Ramaco admitted this point in its letter to Ambre Energy dated April 9, 2013, wherein Randall W. Atkins, Ramaco CEO, asserted Ramaco's rights under the 1954 deed and further stated,

> **Ambre, as a surface owner, has the right at the appropriate time to review our plans and consent, or not consent. If Ambre refuses to offer its consent to a compliant mine and reclamation plan, Ramaco can, and will, petition the Wyoming Environmental Quality Council (EQC) for an order in lieu of consent.**

RECEIVED
MAR 10 2015
DEQ
SHERIDAN

Despite acknowledging BHC's statutory rights, following BHC's refusal to consent to the mine plan and reclamation plan Brook Mining provided BHC to review (which as noted below was different from the mine plan and reclamation plan Brook Mining submitted to DEQ/LQD with its mine permit application), Brook Mining apparently provided the 1954 deed to DEQ/LQD in lieu of BHC's statutory right of consent. See Adjudication, Appendix A Index, Brook Mining Application. BHC admits that it does not possess the right of consent to entry by definition under W.S. 35-11-406(b)(xi), and by virtue of the surface use reservation in 1954 deed, Nevertheless, ***nothing*** in the Wyoming surface coal mining statutes permits a mine permit applicant to utilize a deed, with a general reservation of surface rights, to strip a surface owner under W.S. 35-11-406(b)(xii) of its rights to *review* a compliant mine and reclamation plan and to *refuse to consent* to such plan, or to *exempt* a mine permit applicant from its obligation to petition the EQC and provide sufficient evidence upon which the EQC can make the findings necessary under W.S. 35-11-406(b)(xii)(A)-(E) to support an order in lieu of consent.

According to W.S. 35-11-406(b)(xii), the EQC shall issue an order in lieu of consent if it finds that (A) the mining plan and the reclamation plan have been submitted to the surface owner for approval; (B) the mining plan and reclamation plan are detailed so as to illustrate the full proposed surface use, including proposed routes of egress and ingress; (C) the use does not substantially prohibit the operations of the surface owner; (D) the proposed plan reclaims the surface to its approved future use, in segments if circumstances permit, as soon as feasibly possible; and (E) for surface coal mining operations, that the applicant has the legal authority to extract coal by surface mining methods. Absent a specific exception in the statute, it is not reasonable to infer that the Wyoming Legislature intended that a deed executed and recorded long before enactment of Wyoming's surface coal mining statutes, by parties who no longer own the minerals or the surface, should negate the EQC's statutory obligation to consider, among other things, whether a mine plan proposed in 2014 would substantially prohibit the present surface owner's operations.

Federal surface coal mining statutes allow a mine permit applicant to submit a conveyance that *expressly grants or reserves the right to extract the coal by surface mining methods* in lieu of written consent from the surface owner. *See* 30 U.S.C.A. § 1260 (b)(6) ("SMCRA"). Wyoming's surface coal mining statutes, which preceded SMCRA, contain no such provision, and despite adopting other post-SMCRA amendments, the Wyoming legislature has never seen fit to adopt a similar conveyance in lieu of a consent provision. In *Belle Fourche Pipeline Co. v. Wyoming*, 766 P.2d 537, 548 (Wyo. 1988), the Wyoming Supreme Court noted that "[e]ven though this provision is included in the SMCRA, surface owner consent was not one of the provisions specifically required to be included in a state program." *Id.* According to the court, "Wyoming went even further than the SMCRA in its effort to provide more specific protection of the surface owner" by imposing a qualified requirement that a non-resident, non-agricultural surface owner be "granted the right to a hearing if they object to the proposed mining activities, after which the EQC still could issue an order in lieu of consent." *Id.* at 547-48. The requirement set forth in W.S. 35-11-406(b)(xii) is clear and unambiguous. Brook Mining cannot avoid this requirement by providing DEQ/LQD reservation language in a 1954 deed.

RECEIVED
MAR 10 2015
DEQ
SHERIDAN

Overlapping Permits

As expressly stated in LQD's Coal Standard Operating Procedure No. 2.1 – Coal Permit Content and Review Procedures Relating to Abutting and Overlapping Coal Permit Area Boundaries, "overlapping permit boundaries create unusual permitting, field inspection, annual reporting, and reclamation performance bonding challenges." According to SOP No. 2.1 both permittees have joint responsibility and control over shared lands and ***"there must be cooperation and agreement between the two permittees. Both permits must have mutually compatible Mine and Reclamation Plans that outline the respective operations within the overlapping permit area."*** SOP 2.1, Section II.D. Brook Mining has been uncooperative. There is no agreement between Brook Mining and BHC; and the mine and reclamation plans provided by Brook Mining to BHC failed entirely to outline the respective operations of Brook Mining and BHC within the overlapping permit area. Indeed, the mine plan Brook Mining provided to BHC for review differs from that presented in the Brook Mine Permit Application.[4] These varied representations of Brook Mining's plans stand in direct contrast to the cooperation and agreement contemplated by SOP 2.1.

---

[4] Similarly, the map Brook Mining attached to its written offer to purchase 452 acres of BHC's land is not the same as a supplemental map Brook mining filed in the lawsuit – the map Brook Mining filed with the court shows an area of high wall mining in the north half of Section 22, while the map enclosed with the offer letter does not show any mining in Section 22, but shows the Phase I rail spur being built over the high wall mining area. The map submitted to the DEQ with the Brook Mining permit application shows high wall mining in the north half of Section 22 as well.

SOP 2.1, Section III.B.1.b., Permit Adjudication Section, further provides that a new permit application "must contain a written statement from Permittee 2 that all application elements addressing shared land are acceptable to Permittee 2." It appears that the Brook Mine Permit Application Adjudication Section contains no such written statement from BHC.

SOP 2.1, Section III.B.1.c., Mine Plan, further provides that the Mine Plan for each permit containing an overlapping permit area must include a separate section for each permit area boundary configuration that includes a brief discussion of how the mining operations coincide for the joint use areas. The Brook Mine Permit Application Mine Plan provided to BHC for review contained no such discussion.[5]

SOP 2.1, Section III.B.1.d., Reclamation Plan, further provides that the Reclamation Plan for each permit containing an overlapping permit area must include a separate section for each permit area boundary configuration that includes a map specifying the reclamation responsibility of each permittee. The Brook Mine Permit Application Reclamation Plan provided to BHC for review contained no such map. Nor did the Brook Mine Permit Application provided to BHC for review address the respective performance bond obligations of BHC and Brook Mining within the overlapping permit boundaries as required by SOP 2.1, Section III.B.1.e.

RECEIVED
MAR 10 2015
DEQ
SHERIDAN

SOP 2.1, Section II.B., Definitions, states that where overlapping permit areas occur, the LQD's position is that both permittees have joint responsibility and control over shared lands. BHC's Mine Permit No. 213-T8 expressly provides that BHC shall conduct their operation in a manner which prevents violation of any applicable State or Federal law. If a violation is found to exist in the overlapping permit area, it is uncertain what effect this will have on BHC, BHC's mining permit, and BHC's insurance coverage, especially if the violation cannot be

---

[5] The proposed "joint use" of greatest concern to BHC is that area south of the Tongue River and adjacent to BHC's existing shop facilities. The area was mined in the early to late 1970's and has since been backfilled with unconsolidated, saturated spoil materials with a direct connection to the Alluvial Valley Floor (AVF) of the Tongue River. Mining the Carney and Masters coal seams in this area would require a significant amount of de-watering and discharges into the Tongue River, causing catastrophic damage to the hydrologic balance. Additional monitoring wells in the immediate vicinity of the proposed coffin pit trench cut would be necessary to quantify the amount of water that would be intercepted.

In addition, Brook Mining has proposed stockpiling material on BHC lands in the immediate vicinity of wetlands and an AVF, without consulting with BHC regarding alternate locations that would be more environmentally friendly and would also accommodate BHC business development strategies.

Finally, Brook Mining's proposed mine plan would render reclamation of the historic Placheck Pit (AML Project No. 171 – Northeast Wyoming Coal) on BHC surface lands impossible.

directly associated with one permittee's actions. BHC has many concerns surrounding its potential liability for Brook Mining's activities performed in the overlapping permit area. Additionally, although SOP 2.1 does not specifically address LQD-authorized activities conducted pursuant to a Coal Notification within an existing mine permit boundary, BHC asserts that cooperation between the parties is equally important under those circumstances as the same concerns regarding liability arise for activities performed by Brook Mining pursuant to their Coal Notification in BHC's mine permit area.

Requested Action

BHC sincerely appreciates LQD's responsiveness to BHC's inquiries to date. For the reasons stated above, BHC respectfully requests that DEQ/LQD (1) expressly acknowledge BHC's right, pursuant to W.S. 35-11-406(b)(xii), to review and consent to the mine plan and reclamation plan Brook Mining submitted to DEQ/LQD; (2) absent BHC's consent to a compliant mining plan and reclamation plan, require Brook Mining to petition to the EQC for an order in lieu of consent; and, (3) require that Brook Mining provide BHC (i) a list of wells and plan of operations, and (ii) prior notice of entry, under any existing or future Coal Notification that permits activities within the boundaries of BHC Mine Permit No. 213-T8.

Sincerely,

Lynette J. Boomgaarden

Lynne Boomgaarden
Crowley Fleck, PLLP

RECEIVED
MAR 10 2015
DEQ
SHERIDAN

cc: Andrew Kuhlmann
Mark Rogaczewski

MEMORANDUM

TO: File: TFN 6 2/025
FROM: David J. Myers – LQD DIII Natural Resources Analyst
DATE: April 3, 2015
SUBJECT: First Round Review of Brook Mine New Permit Application

As requested I have reviewed the new Brook Mine permit application (TFN 6 2/025). I have reviewed Adjudication, Appendix D1 (Land Use), Appendix D4 (Climatology), Appendix D5 (Topography), Appendix D6 (Hydrology - Surface), Appendix D9 (Wildlife), Appendix D10 (Wetlands), Appendix D11 (AVF), the Mine Plan, and the Reclamation Plan. As we discussed in the March 12, 2015 phone call with Matt Kunze, LQD Hydrologist, I agree with Matt's comments and will not duplicate them here. My observations are below.

Adjudication – Appendix B2 – Groundwater Rights – There is a groundwater well that is missing in this volume. The listing is as follows:

Barbula #2
Permit No. 85631W
Location: SW NW Section 21, T57N R84W

Please add this entry to the table and to any corresponding maps.

Appendix D1-Land Use

I have no comments on this Appendix

Appendix D4-Climatology

I have no comment on this Appendix

Appendix D5-Topography (introduction, topography, and slope assessment only)

I have no comments on this Appendix

Appendix D6-Hydrology

D6.1x – The drainage basin description and surface water quantity sections are lacking detail. As mentioned in M. Kunze's comments, the data from the terminated Slater Creek USGS gauge, and historical monitoring data from Big Horn Mine (permit no. 213) should be included.

The data collected at the monitoring stations that is presented in Addendum D6-4 does not appear to agree with the statement that Slater Creek is a "predominantly ephemeral" stream. Please reconcile the text with the data.

D6.2.4 States that Groundwater Rights are in Appendix E2 of the Adjudication Volume. Groundwater Rights are actually listed in Appendix B2. Please Correct.

Appendix D9-Wildlife

Page D9-3 states that when a sage grouse confirmation letter is provided by WG&F, it will be provided to DEQ. It appears that the confirmation letter is already part of the package (Page D9-E3). Please reference the location of the letter.

Appendix D10-Wetlands

D10-1.4 – Please include a copy of the letter requesting concurrence and jurisdictional determination sent to the ACOE At the end of the text, and reference the letter in the text.

Appendix D11-AVF

I have no comments to add, but agree with M. Kunze's concerns related to this section.

Mine Plan

MP.3.1.3 – A primary haul road appears to cross the Tongue River using the bridge that is currently in place from previous mine usage. Please discuss any updates needed for that bridge to be adequate for the intended usage.

Exhibit MP4-3 shows Overburden Stockpiles OB-12 and OB-13, and Topsoil Stockpile TS-6 being located directly in the Slater Creek channel, without any mention of redirecting slater creek, or otherwise preventing the hydrologic consequences of damming up the creek with Overburden and Topsoil stockpiles. Please correct.

MP.7 – Because of the proximity of the planned facilities primarily in T57, R84 Sec.15 to the Tongue River and Goose Creek, I would like to see surface water monitoring upstream of these facilities on Goose Creek and Tongue River, and downstream of these facilities on Tongue River. Please discuss the feasibility of fulfilling this request, with reasoning.

Reclamation Plan

I have no comments to add, but agree with M. Kunze's concerns related to this section.

MEMORANDUM

To: File, RAMACO Brook Mine Permit Application, TFN 6 2/025

Thru: BJ Kristiansen

From: Dave Schellinger, Soils Specialist, LQD District 3

Date: January 27, 2015

Subject: Round 1 review

As per your request for review dated November 13, 2014, I have completed a review of Appendix D1-Land Use, Appendix D5-Overburden Assessment, Appendix D7-Soil Resource Assessment, Appendix D11-Mine Plan and Appendix D12-Reclamation Plan and offer the following comments.

Appendix D5

1) The Coal Rules and Regulations, Chapter 7, Section 1(a)(i)(A) states that information required for the geological description pursuant to Chapter 2, shall be as follows: for areas where surface operations and facilities will cause removal of overburden down to a level of the coal seam, all information outlined in Chapter 2. Overburden sampling has not been performed in many of the locations where overburden will be removed during the mining operations. Additional sampling will be required to assess overburden chemistry in all areas where overburden removal will occur. The intensity of sampling should be 1 core per 160 acres (per quarter section). The LQD requests sampling every 1,900 linear feet on longer proposed disturbance areas or, at minimum, two cores within shorter disturbances separated sufficiently to provide a representative characterization of the proposed disturbance.

    a. Not all overburden has been characterized during analysis. Several lenses of shallow coal mixed with partings or narrow coal seams that will not be mined were not characterized. Because all overburden must be handled so as not to negatively affect surface water, groundwater or vegetation, all overburden must be adequately characterized. Therefore, the LQD requests additional characterization of all overburden that will be backfilled into disturbed areas. It must also be stated that special handling and/or identification and use of

topsoil/subsoil replacement may be required if unsuitable backfill or soil is placed within 4 feet of the surface on upland areas or within 10 feet of the surface in stream channels.

2) Section D5.4. – documentation of protocols that differ from those approved by the Administrator in Guideline 1 typically require a signed document by LQD staff, not a request for different procedure signed by the company. This issue has been discussed with other mining companies and it has been determined that documentation of approval by LQD staff will be required if sampling/analytical protocols differ from those required by standing LQD policy. Please provide documentation of LQD staff approval for the 10-ft. overburden sampling interval.

3) Table D5.4-1 and Table D5.4-2 do not provide the current approved selenium concentration limits of 0-3 ppm (suitable), 3-8 ppm (marginal) and > 8 ppm (unsuitable). Please be sure to include the current approved suitability criteria as shown in Guideline 1, page 42. This will change the conclusions of the discussion provided in the Appendix D5 text. Also, in Table D5.4-2, please provide the correct units for analytical results in mg/Kg, not mg/L.

4) The permit application provided to LQD staff for review has duplicated data provided after the map identified as Exhibit 1 which should be deleted. The exhibit should also be better identified as Exhibit D5-1 or something similar to clarify placement in the permit application should it become separated from the document in the future.

5) Comparisons were made between Exhibit 1, the soils map and the Mine Plan map. Distinct differences in the affected area and permit boundaries were observed. Please be sure that correct boundaries for the proposed affected area and permit area are provided on all maps. Please also provide the contour interval on this exhibit.

Appendix D7

6) Exhibit D7.3.-1 was compared with Exhibit MP.1-1. As required, it appears that the soil sampling was concentrated in areas where surface disturbance is to be expected. Please provide the contour interval on the soils map. For ease of review and to prevent misinterpretation, however, the map showing sampling locations should also clearly show the locations of proposed surface

disturbances instead of providing these details on separate maps which may or may not present differing scale distances.

7) Page D7-4. The second paragraph of this page contains text that should be deleted. It states "If for whatever reason overall sampling intensity…..was determined to not be enough, it is proposed that any additional sampling be deferred and included a stipulation of a future pre-stripping soil assessment program." The Mine Plan and Reclamation Plan soils handling and replacement is contingent on adequate baseline sampling of the proposed area that will be affected by mining operations (topsoil balance and stockpile location planning and bond calculation). Therefore, baseline sampling for soils must be adequate prior to approval of any permit application. Please remove the inappropriate language from the Appendix D7 text. If future changes to the Mine Plan require additional soil sampling the issue will be addressed at that time.

8) Page D7-9. Text appears in this section that upon NRCS declaration of prime farmlands occurring in the permit area, a letter will be provided to the DEQ. A letter from the NRCS has been received and inserted in the permit declaring no prime farmlands to exist. The text, therefore, is not appropriate and should be removed.

9) WS § 35-11-415(b)(iii) and the Coal Rules, Chapter 4, Section (c)(ix) state that if topsoil is virtually nonexistent or is not capable of sustaining vegetation then subsoil or a selected spoil material may be used as a topsoil or subsoil supplement. Additionally, due to the proximity of this mine to the Tongue River, a Class 2AB stream, limits for chemical contaminants will be imposed on discharges from the permit. Therefore, for areas where unsuitable or marginal topsoil chemistry is located (e.g. Wibaux channery loam, sample R13), an alternative soil replacement material should be identified and used in reclamation. Such a commitment must also be provided in the Mine Plan and Reclamation Plan to provide evidence that such issues that could affect the condition of reclamation and/or lead to off-site impacts will be addressed.

10) The description of Map Unit G (Bauxson Loam, sample R-19) does not show marginal selenium that occurs between 22 – 48 inch depth range which could affect the salvage depth and may require special handling of the marginally suitable subsoil.

Mine Plan

11) Depending upon the outcome of required overburden sampling, commitment for special handling of unsuitable overburden will be required to assure that placement of unsuitable materials so as not to hinder plant growth or to adversely affect surface or groundwater quality will be required in the Mine Plan.

12) Does RAMACO provide a better detailed description of the topsoil salvage and handling process than that discussed in section MP.4.2.1? The description provided is not detailed so as to provide a description of the equipment used, the methods for assuring adequate soil salvage, or whether topsoil and subsoil salvage will follow the recommendations in Appendix D7 for stockpiling topsoil separate from subsoil. Please understand that topsoil and subsoil may only be mixed if both meet Guideline 1 suitability criteria. Please include more detail for topsoil salvage and handling or let the LQD know where the information may be accessed.

13) Section MP.4.2.3 all topsoil stockpiles, even those stockpiled temporarily or windrowed at the edge of a disturbance, must be identified by a topsoil sign from initiation of the salvage operation as required under Chapter 4, Section (c)(D) that states that signs must be in place at the time stockpiling is begun. Therefore, the text in the first paragraph of this section stating that signs will not be required must be corrected. Signs will always be required to identify all salvaged topsoil and must be placed on all approaches to the topsoil and no more than 150 feet from the stockpile location.

    a. Additionally, all stockpiled topsoil, even windrowed along the edge of a disturbance, must be protected against wind and runoff erosion, compaction or potentially toxic materials no matter what the longevity designation of the stockpiled material. The Mine Plan must provide a commitment to these requirements.

14) Section MP.4.2.4 does not discuss topsoil salvage during winter months. Salvage during the winter months, especially of shallow soil profiles, is discouraged by the LQD due to a lack of depth control caused by varying depths of permafrost. Please provide discussion concerning this subject.

a. Even short term and temporary topsoil stockpiles must be identified on maps and the volumes accounted for in annual reports. Several criteria that must be considered are well established for placement of topsoil stockpiles and include:
    i. Construction of stable areas to minimize wind and water erosion
    ii. Stockpiles will not be placed in areas where runoff water can contribute to the loss of topsoil (side hills or drainages)
    iii. Stockpiles will not be constructed on unsuitable backfill locations
    iv. Stockpiles will have associated sediment control established in advance of construction
    v. Stockpiles will not be constructed at locations of known cultural or wildlife resources for which protection or mitigation is required.

b. Other topsoil stockpile construction and maintenance considerations include:
    i. Stockpiles will be constructed with slopes of 3h:1v or less
    ii. Bypass ditches, berms or equivalent may be used to divert runoff around stockpiles
    iii. Stockpiles that will remain for less than 1 year may be revegetated or treated with surface roughing methods such as ripping or discing to reduce runoff and wind erosion potential.

15) Section MP.4.2.7, page MP 4-5. Aside from operation of soil salvage equipment with the potential for soil contamination due to blown hydraulic hoses or small fuel leaks, the LQD expects not contamination of soil during the mining operation. Contamination of subsoil and overburden is more likely. The LQD recommends that RAMACO re-phrase the section header and text to show petroleum contaminated materials being and not soils.

a. What criteria will RAMACO use to determine if spills require reporting to the DEQ, and what process will be used in spill reporting?
b. What will the operational procedure be for management of the proposed on-site landfarm for contaminated materials, and where will it be located? Will it be identified on the ground by a sign?

16) Section MP.4.2.8. Please provide a detailed description for the disposal of empty drums, not just a citation of the EPA Rule which is probably not know by most readers of this public document.

17) MP.4.3.1 discusses overburden removal processes. However, little detail is given to explain the actual process for overburden handling. Will the first cut be stockpiled and used to fill the last cut? When special handling is required, which is almost certain given the nature of some overburden and the need for some soil replacement materials, what assurance will be made that poor quality materials will be safely located in the backfill or in separate stockpiles, or that topsoil substitutes will be handled and stored as topsoil in a useful manner as required under Chapter 4, Section 2(b)(x)(A)? Please provide a more detailed overburden handling plan. Perhaps some of these details are observed in later sections. Please provide additional details not provided elsewhere.

18) Section MP.4.3.4. The volumetric analysis shown in Table MP.4-4 and MP.4-5 may change depending on results of required additional overburden sampling and volumetric analysis. If the overburden depth overlying coal changes as a result of additional sampling, the volumetric analysis will also change. If post mining contour changes are necessary due to adjusted swell factors permit revision will probably not be required until the changed PMT exceeds plus or minus 20 feet of the approved at which time a Reclamation Plan revision will be required. This kind of detail should be included in the permit commitments.

19) Section MP.4.6.1. The typical overburden sampling protocol as stated in Guideline 1 calls for one sample taken every 40 square acres of the permit area. Overburden sampling for underground mining operations differs from typical coal mine sampling protocols and is stated in the Coal Rules, Chapter 7, Section 1(a)(i)(A) which calls for overburden sampling and characterization on areas where surface operations will cause removal of overburden down to the level of the coal seam. Please make changes to the text accordingly and perform additional overburden sampling where required.

20) Section MP.4.3.5. A statement was made in this section that “Overburden stockpiles will only block ephemeral drainages if runoff control and sediment control measures are made and approved by WDEQ/LQD.” Placement of overburden in ephemeral drainages will require a discussion of how water will be diverted around the overburden stockpile to prevent impoundment of water in addition of a discussion of sediment control measures for the stockpile to prevent of-site impacts of erosion down-slope from the stockpile. The LQD recommends that no overburden stockpiles be placed in ephemeral drainages.

21) Tables MP.1-1, MP.1-2 and MP.4-1 must show the actual years for proposed progressions, or the year 1 progression must be tied to a specific year in the Mine Plan text.

22) Tables MP.4-3 and MP.4-5. Topsoil volumes appear to be underestimated in TS- 2, TS-6, TS-10 and TS-11 while underestimating the proposed volume in TS-1. Also overburden volumes appear to be underestimated in OB-4, OB-7, OB-11, OB-14 and OB-15, and overestimated in OB-16, which may affect estimates presented in TableMP.4-4 as well.

23) Exhibit MP.4-2 and MP.4-3 must show the dates (actual years) for the salvage of topsoil and removal of overburden, or year 1 must be tied to an actual year when operations will begin (2016, 2017, etc.). The map or tables in the Mine Plan must provide proposed years and volumes for stockpile construction as well.

Reclamation Plan

24) Section RP.4. This brief section discusses what is considered spoil material to be removed during mining. The section states that spoil does not include coal, but there are some very narrow coal seams with numerous stringers of clay or of such low quality that will probably not be mined and will be placed in backfill. Also, the top layers of most coal seams are quite “dirty” and would also be removed and backfilled. In order to provide the readers with a more accurate description of the mining and reclamation processes, please revise the text to show that some coal-laden materials will also be considered spoils and will be backfilled during reclamation.

25) Section RP.5.2. Please provide a description of the methods used to control topsoil depth during replacement. Most mining operations use stakes with surveyed marks as guides for controlling soil application depths.

26) Section RP.5.4. Variability in topsoil depth cannot be avoided due to limitations imposed by the equipment used and the pre-application preparations which may include ripping of the compacted overburden surface. Typically, the depth of topsoil application may vary 25%, but the average depth should be closely monitored and should not exceed the average availability. Also, because some soils exhibit unsuitable characteristics and will not be used for reclamation, discussion of the use of substitute topsoil materials is warranted in this section.

27) Section RP.5.6. Sediment control measures will be required to prevent untreated runoff from exiting reclaimed lands onto adjacent native lands. Please provide a discussion of the sediment control measures to be used.

28) Section RP.8.2. This section states only that impoundments will require Landowner, LQD and SEO approval. Prior to construction of post mining impoundments, SEO approved plans for the impoundments must be submitted for inclusion in the permit Reclamation Plan. Please include a statement that a Reclamation Plan revision will be approved by the LQD prior to construction of impoundments.

29) Section RP.11.1. The primary final land use for the permitted acreage will be grazing and wildlife. Only areas where the current use is industrial will remain industrial land uses after mining is completed. Therefore, in order for any constructed buildings or railroad access to remain following mining, and a permit revision to change the land use will be required. It is not just a matter of demonstrating usefulness to the LQD and receiving landowner consent. This will be a major revision to the permit that will require public notice. Clarification should be provided concerning the steps involved to allow building to remain.

30) All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

MEMORANDUM

TO: Bj Kristiansen, LQD-DIII Assistant Supervisor

FROM: Doug Emme, Blasting Program Principal

DATE: May 5, 2017

SUBJECT: RAMACO Brook Mining Co., LLC; Brook Mine Coal Permit Application; TFN 6 2/025

I have completed my review of Mine and Reclamation Plans for this permit application and there are several comments that need to be addressed. There has been no Reclamation Bond Estimate submitted at this time so there is nothing to review. The following items need to be adequately addressed before this permit can be approved:

Mine Plan

1. **Figure MP.1.2 and page MP-3** – MSHA and best practices may require a safety berm on this safety bench which could require a wider bench. Figure MP.1.2 notes a minimum of 35' but the text on page MP-3 just states the bench will be 35' wide. There is a real possibility this safety bench might be used for light plants so it may need to be wider for access and small vehicle use as well as providing a safety bench.

2. **Table MP.1-1** – The total disturbance doesn't seem to match the overall disturbance listed for the trench mining and facilities. Please explain or correct.

3. **Section MP.2.3, page MP-9** – The 1st sentence would be better if it started, "The explosive materials…". The 2nd sentence should replace the word "detonating" with "explosive". The 5th sentence in the 2nd paragraph should include cast boosters. The 6th sentence in the 2nd paragraph should discuss storage of emulsions, water gels, and slurries also. This section should also commit to proper signage of the explosive storage area. Please correct.

4. **Section MP.5.7.5, page MP-34** – The word "of" in the 2nd line of the last paragraph should be "or". Please correct.

5. **Section MP.6.1, page MP-39** – The 1st sentence of the 1st full paragraph needs some improvement so it reads properly and makes sense. Please correct.

6. **Section MP.14.2, page MP-55** – The 2nd paragraph discusses the use of "cast primers". The term should be "cast boosters" as it doesn't become a primer until the detonator is added or detonating cord is attached to it. The discussion of

priming holes should describe the use of a cast booster and how it is made-up to become a primer, i.e. with detonating cord or a detonator (blasting cap). Please correct.

7. **Section MP.14.3.2, page MP-56** – In the 2nd line the item "(primer with detonator)" should be changed to "(cast booster with detonator)". Please correct.

8. **Section MP.14.3.2, page MP-56** – The 2nd paragraph discusses powder factors in coal and overburden and the high end of the ranges is extremely high for the type of rock and coal in this area. RAMACO should eliminate the range and simply state powder factors will be adequate to effectively fragment the overburden and coal.

9. **Section MP.3.3, page MP-56** – RAMACO should reword this to say that initiation will be done using non-electric or electric systems, which may include electronic detonators, shock tube detonators, detonating cord, electric detonators or a combination of these. Igniter cord is used to initiate safety fuse and it's highly unlikely that any safety fuse will be used at this mine. Please correct.

10. **Section MP.14.4, pages MP-56 & 57** – It is probable that emulsions will also be stored on site so it should be mentioned since emulsion/ANFO blends are the most widely used product in wet holes. Please correct.

11. **Section MP.14.6, pages MP-57 & 58** – Residents who request a pre-blast survey must make the request to the permittee and the Administrator of Wyoming Land Quality Division (LQD). The permittee is responsible for getting the pre-blast survey done and distributed to the person that requested it and the LQD Administrator. Please correct.

12. **Section MP.14.7, pages MP-58 & 59** – LQD will not approve protecting uninhabited structures (what LQD refers to as engineered structures) at 8.0 inches per second (ips) of peak particle velocity. LQD would allow a maximum limit of 5.0 ips. RAMACO would have to assure that this limit was not exceeded by the use of a seismograph at these structures on all blasts. RAMACO could apply for a modified scale distance factor to show compliance with this limit of 5.0 ips by submitting a vibration study and doing a regression analysis to show the allowable ppv is not exceeded at a 95% confidence level. However, this will require the vibration study be submitted with seismograph records from shots in

the mining area so it cannot be done until after some blasting has been done at the mine. Please correct this text.

13. **Section MP.14.8.1, page MP-60** – The discussion on typical pattern size should be changed to more general language. Using the parameters given the powder factor used would be approximately 0.16 lbs./CY using ANFO and in the 0.23-0.25 lbs./CY range when shooting an emulsion blend. These powder factors are not high enough to adequately fragment the overburden. Please correct.

14. **Section MP.14.8.1, page MP-60** – The 2nd paragraph says if water is in the holes a slurry or water gel explosive will be used. Most likely an emulsion/ANFO blend with good water resistance will be used in wet holes and not a slurry or water gel. Please correct.

15. **Section MP.14.8.1, page MP-60** – The 3rd paragraph discusses the explosive weight per hole and the powder factors. The explosive densities listed are correct but the pounds per hole and powder factors are incorrect. In a 7.875" hole and with a density of ANFO of 0.85 g/cc the pounds/foot of hole is 17.95 lbs. and with 24' of powder column the pounds/hole is 431 lbs., making the powder factor = 0.16 lbs./CY. Similarly using an emulsion blend of 1.32 g/cc the pounds/foot = 27.87 lbs. and the pounds per hole would be 669 lbs. so the powder factor =o.25 lbs./CY. In the 50' hole described with 26' of stemming and 24' of powder the powder distribution is poor so it would likely lead to blocky material near the top of the bench. Please correct.

16. **Section MP.14.8.2, page MP-61** – Drilling a 35' x 35' pattern in a 15' thick coal seam with a 7.875" hole and 4.5' of stemming will probably result in excessive flyrock, stemming ejection, high airblast and hard zones between the holes. Expecting to stem 4.5' is not realistic – in the field the blaster is going to try to hold for 4' or 5' of stemming. Again RAMACO discusses using slurry or water gel in wet hole when an emulsion/ANFO blend with high water resistance would probably be used. Please correct. Also the powder factor listed for coal is probably a little high so it would be better to just say that the powder factor will sufficient to fragment the coal for the prime movers. Please correct.

17. **Section MP.14.10, page MP-63** – The last bullet item says that detonation during electric storms might be a reason for unscheduled blasting. This is confusing because it makes it sound like the operator would shoot during electric

storms and the only safe thing to do when an electric storm approaches is clear the pattern and keep everyone a safe distance away until the storm passes. Please correct.

18. **Addendum MP-7, Blaster's Log** – Under the "Holes" heading RAMACO should use "burden" not the term "burden spacing". On the 2nd page the word "signiture" should be changed to "signature". Please correct.

Reclamation Plan

19. **Section RP.5.1, page RP-6** – RAMACO states that the contoured surface will be scarified or ripped, if necessary. The mine should commit to scarifying or ripping all surfaces prior to topsoil replacement.

20. **Section RP.5.6, page RP-8** - The 1st sentence of the 2nd paragraph doesn't make sense. Please correct.

I would not recommend approving this permit application until these comments have been adequately addressed and a bond has been submitted and approved. If you have any questions please let me know.

To: File, BROOK MINE COAL PERMIT APPLICATION, TFN 6 6/025

Re: Round 1 Comments

From: **Wyoming Game and Fish Department**

Date: March 12, 2015

The Wyoming Game and Fish Department was asked to review the Brook Mine Coal Mine Permit Application, Wildlife Section (Appendix D9) on November 26, 2014. Their response was received on Friday, March 13, 2015 via email. The original letter is attached to this memo.

The comments from Game and Fish were as follows:

1. We recommend this report become part of the annual reporting which will ensue throughout the operation of the mine.

2. We suggest coordinating with the USFWS regarding raptor mitigation as needed through the mining process.

3. We recommend mining reclamation practices consider providing suitable habitat for existing wildlife within the specifications required by DEQ-LQD.

End of comments from Wyoming Game and Fish.

MEMO

To: File, Brook Mining Co., LLC, Brook Mine, TFN 6 2/025

From: Jaime J. Jakes

Date: February 5, 2015

Subject: Review of Permit Application for Brook Mine, TFN 6 2/025

Appendix D8

1. Please update the permit boundaries so that they are the same on Exhibit D8. 2-1 and Addendum D8 Map 1. I note specifically that lands should not be included within the permit boundary south of the interstate and that Section 10 TWN57N RNG85W displays different boundaries along the far west edge of the permit; it appears that the section lines are skewed between the two maps. The Addendum D8 Map 1 also is missing a sizeable amount of lands located in Section 21 TWN54N RNG84W which are included within the permit boundary of the Adjudication Exhibit 1 map. While comparing the maps I find that the maps display the same information in slightly different formats, please explain the necessity for two individual maps and at a minimum make them consistent against one another.

2. Why does the study area not include all lands within the proposed permit boundary?

3. The acreage displayed on Table D8.2-1 should equal that of the land permitted on the Form 11. The Form 11 displays 4,548.8 acres while the table shows 4,581.7 acres a difference of 32.9 acres. Please update either the Form 11 or Table D8.2-1 to show the true permit acreage as it relates to the vegetation communities. Upon further review I find that Table D8-2 located on page Addendum D8-1-41 exhibits the proper acreages in relation to the Form 11, thus the values represented there may be more accurately displayed in Table D8.2-1.

4. Table D8.2-1 states there are 56 acres of agricultural lands; however, I am unable to locate Agricultural lands north of the interstate. Please, discuss and edit the values to display true acreages in relation to the proposed permit

boundary. (See comment 3 for more clarification and another table for utilization to update values.)

Reclamation Plan

5. Exhibit RP 6-1 also displays permit boundary discrepancies in regards to the section lines on it and those located on the Adjudication Exhibit 1. Please update accordingly.

6. Table RP 6-1 states that there are 11.6 acres of wetlands and other aquatic resources. Please discuss where these acres are to be reclaimed and show them on the Exhibit RP. 6-1 which displays the reclaimed vegetation communities and their locations.

MEMORANDUM

TO: File, Brook Mining Company, LLC, Brooks Mine Permit Application, TFN 62/025

FROM: Kim Medina, Project Geologist, LQD District III

DATE: January 12, 2015

SUBJECT: Round 1 Technical Review

Technical Review Comments – Appendix D5, Topography, Geology and Overburden Assessment

1. Geologic cross-sections should present other lithology of concern, such as aquitards or aquifers across the permit area. Please review the geology of the area to assess whether lithology of hydrologic concern should be presented on the cross-sections.

2. Page D 5-9 refers to samples collected from roof and floor from "many" locations throughout the permit area. However, supporting documentation appeared to be from only two borings and included two roof and one floor sample. In addition, the laboratory noted the floor sample did not have sufficient length and a correction factor was used to determine unconfined compressive strength. Additional structural analysis of the overburden, interburden and floor is required.

3. Please provide a discussion of the structural analysis of the overburden and interburden. The discussion shall address the potential for subsidence during and after mining.

4. Please discuss the aquifer(s) below the lowest coal seam and the potential for mining to impact these aquifer(s).

Technical Review Comments – Appendix D6, Hydrology

1. Page D6-12: Application states "detailed cross sections of the permit area geology shown in Appendix D5"; however as discussed previously the cross sections only showed the stratigraphy of the coal seams throughout the permit area. General lithology was not shown.

2. The pre-mining potentiometric map for the Masters coal seam shows the elevation of the groundwater at a higher elevation than the surface elevation in Sections 11 and 12 (in the vicinity of Slater Creek outside of the permit area). Either show the potentiometric surface as doted across this area or revise the potentiometric lines such that the groundwater elevation is below the ground surface elevation. Issue

addressed by Bj Kristiansen. Please see comment No. 65.

3. The groundwater elevation for the Carney coal seam in monitor well 578417-CRN was given as 3795.59. The potentiometric contour for 3800 is drawn south of this monitor well. Please correct the contour line to be consistent with the groundwater elevation shown for monitor well 578417-CRN. Correction of this contour line may also adjust how the contour lines for 3780 and 3760 are drawn, such that they may be drawn consistent with other contour lines.

4. Page D6 8-8: The text refers to the pump test in the Carney coal seam. According to the procedures in the previous section, transducers were placed in CRN and CRN-OB; however on the referenced page, it states transducers remained in MST and MST-OB after pumping. LQD believes this to be a typographical error.

5. Please discuss why the water levels rose in the Carney coal seam during the pump test in the Masters coal seam.

6. What effect would a leaking pump have on the results of the pump test in the Masters coal seam?

7. Please make sure all maps that are stamped are also signed and dated by the engineer, as required by regulation.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Matt Kunze, LQD Division Services

DATE: March 12, 2015

SUBJECT: First Round Alluvial Valley Floor (AVF) Comments on Brook Mine New Permit Application (TFN 6 2/025)

The following are comments related to AVF sections (Appendix D11, Mine Plan, Reclamation Plan) of the Brook Mine permit application.

Appendix D11-AVF

Section D11.1 Introduction

1. In the second paragraph on Page D11-1, the possible impacts of the proposed mining operation on the Tongue River AVF are dismissed because the area is planned for facilities level disturbance only. However, the groundwater model (Mine Plan Addendum MP-3) predicts drawdown in the Tongue River alluvium, thereby possibly affecting the AVF. As discussed in subsequent comments, additional analysis and monitoring is needed to comply with LQD Coal Rules and Regulations regarding AVFs. (MDK)

Section D11.2 Purpose and Scope

2. On Page D11-2, please change “Wyoming Reclamation Act” to “Wyoming Environmental Quality Act”. (MDK)

Section D11.3 Stream Laid Deposits

3. For identification of unconsolidated stream laid deposits, LQD Guideline No. 9 (AVF) lists two items that may be used to positively identify unconsolidated streamlaid deposits: (1) channel bars, splays, abandoned meanders, modern flood plains, or terraces, and (2) bedload or washload sediment deposited or transported in a nonbedrock channel bottom. Presumably, item (2) would be met at the streams identified within the AVF study area. However, the permit application does not address whether the channels contain geomorphic features from item (1). Please address in the text whether channel bars, splays, abandoned meanders, modern flood plains, or terraces are observed within the streams within the AVF study area. (MDK)

4. On Page D11-5, the conclusion that the materials in Hidden Water Creek valley do not meet the definition of unconsolidated streamlaid deposits, is in conflict with the conclusion from the Big Horn Mine Permit. The Big Horn Mine Permit

(Appendix D6, Pages D6-151 to D6-158) describes the evaluation of unconsolidated streamlaid deposits on lower Hidden Water Creek. The permit states: "*The conclusion verified from the pit observations is that these deposits are unconsolidated and stream laid. Small isolated patches of colluvium or bedrock can be found throughout the alluvial deposits, but these characteristics do not exclude the deposit from being stream laid*." Please evaluate the data and findings from the Big Horn Mine Permit before a conclusion is drawn about the absence of unconsolidated streamlaid deposits on Hidden Water Creek. (MDK)

5. The Big Horn Mine Permit also describes subirrigation and flood irrigation studies on lower Hidden Water Creek and concludes: "*Due to the lack of subirrigation and extremely low potential for flood irrigation, Hidden Water Creek is not an alluvial valley floor*." Although this is in the approved mine permit, it does not appear that an explicit AVF determination for Hidden Water Creek was ever issued by the LQD, and the AVF findings in the SDDs for the Big Horn Mine Permit do not mention Hidden Water Creek. The Brook Mine Permit application should incorporate these previous AVF studies on Hidden Water Creek into Appendix D11. (MDK)

Section D11.4.2 Extent of Subirrigation

6. On Page D11-6 it is stated the three monitor wells were installed along the thalweg of Slater Creek. The transects in Exhibit D11.3-2 show that two of the wells (578513-AL and 578418-AL) are not along the thalweg but are rather upgradient of the channel. Please revise this description in the text. (MDK)

7. It appears that from Exhibit D11.1-1 that subirrigation is occurring on Earley Creek within the AVF study area. Please explain why subirrigation was not mapped on Earley Creek. (MDK)

8. On Page D11-6, second paragraph, the alluvial/colluvial potentiometric surface is dismissed as a source of subirrigation along Slater Creek. However, the other hydrologic processes responsible for the subirrigation are not identified. Please discuss in the text why subirrigation is occurring along Slater Creek. (MDK)

9. The cross-sections in Exhibit D11-3-2 would be improved if the active channel and any floodplains or terraces were shown. A description of the materials in the active channel bottom would also help identify unconsolidated streamlaid deposits. (MDK)

Section D11.4.3 Extent of Natural and Artificial Flood Irrigation

10. In Exhibit D11.4-1, the extent of irrigated lands shown in Sections 2 and 11 along Slater Creek may not be correct. According to the summary for the Hart Brothers Ditches water right (permit 1317) in the SEO database, the land being irrigated under the water right has decreased to 23 acres:

THIS FACILITY IS MADE UP OF TWO DITCHES. THE WEST DITCH HAVING A POINT OF DIVERSION IN LOT 2 AND THE EAST DITCH HAVING A POINT OF DIVERSION IN THE SENE OF SECTION 3, T57N, R85W. T57N, AND 58N, R85W HAS BEEN DEPENDENTLY RESURVEYED. REQUEST FROM PADLOCK RANCH TO ELIMINATE 67 ACRES AS FOLLOWS: 32 ACRES IN THE SWSW OF SECTION 2 - 30 ACRES IN THE NENW AND 5 ACRES IN THE NWNW OF SECTION 11 ALL IN T57N, R85W, RECEIVED AND GRANTED. REQUEST OF ELIMINATION AND PROOF OF OWNERSHIP FILED IN MISCELLANEOUS NOTICES. ADJUDICATED WITH H.H. WILLIAMS AS APPROPRIATOR. PERMIT RECORD REFLECTS SOURCE AS SLATER CREEK AND WATER STORED IN THE HART BROTHERS RESERVOIR, P60R, XR7825A, HOWEVER CERTIFICATE RECORD REFLECTS .91 CFS FOR THE IRRIGATION OF 64 ACRES. BOC PETITION II 89-4-2 BY PADLOCK RANCH WAS GRANTED TO ISSUE AMENDED CERTIFICATE C77/290A TO REDESCRIBE LANDS WITHOUT CHANGING LAND TOTALS AND TO CHANGE POINT OF DIVERSION FROM THE RECORD POINT IN THE NWNE AND SENE OF SECTION 3, 57N, R85W AND PARTIAL MEANS OF CONVEYANCE FOR 41 ACRES (.59 CFS) TO THE WILLIAMS DITCH, P8710D, C77/289A DIVERTING WATER FROM SLATER CREEK IN THE SESW OF SECTION 34, T58N, R85W AS RECORDED IN ORDER RECORD BOOK 36, PAGES 385-390 AND RECEIVED ON CD3/578A. THIS LEAVES 23 ACRES STILL IRRIGATED UNDER THIS PERMIT. LANDS SHOWN BELOW AS "AME" AND "ELI" ARE THOSE ORIGINALLY DESCRIBED UNDER THIS DITCH.

Please clarify the irrigated acreage status for the Hart Brothers Ditches water right with the SEO and revise Exhibit D11.4-1 accordingly. (MDK)

Section D11.4.4 Water Quality

11. On Page D11-7, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

Section D11.4.5 Agricultural Practices

12. On Page D11-8, second paragraph, it states that Exhibit D11.1-1 shows that sufficient water supply does not exist for consistent agricultural practices in East Fork Earley Creek. However, Exhibit D11.4.1 shows a point of diversion for Earley Creek Ditch No. 1 and several areas of irrigated lands less than 40 acres in East Fork Earley Creek. As documented in Addendum D11-4, there is an adjudicated water right for irrigation in this location. So there *may* be sufficient water supply for consistent agricultural practices. The text needs to further expand on this discussion of East Fork Earley Creek since there is an adjudicated water right for irrigation. (MDK)

13. On Page D11-8, last paragraph, it states that the hay meadows along Slater Creek in Sections 2 and 11 are not within the boundaries of subirrigation or natural flood irrigation.

    (a) The areas symbolized as irrigated lands in Exhibit D11.4-1 do not necessarily correspond to hay meadows, as the imagery shows hay meadows in the

SWNE, SENE, and NESE of Section 11, and the NWSW of Section 12. The hay meadows appear to correspond with the area mapped as "AG" in the Vegetation Map (Exhibit D8.2-1) in Addendum D8.

(b) The irrigated area shown in Exhibit D11.4-1 near the Landen Ditch does overlap with subirrigation mapped in Exhibit D11.1-1.

Please re-evaluate the area of hay meadows along Slater Creek and revise the text accordingly. Comments No. 15 and 16 below also relate to this issue. (MDK)

14. On Page D11-8, last paragraph, it states that, besides Hart Bros Ditches, the remaining portion of the Slater Creek valley does not contain SEO water rights. This is not the case as Exhibit D11.4-1 shows Landen Ditch in the NENW of Section 11. This water right (P11695) does not appear in Addendum D11-4. Please revise the text and add this water right to Addendum D11-4. (MDK)

15. The irrigated acreage for the Landen Ditch water right appears to be 18 acres for one point of use and 22 acres for a second point of use. Please add these areas to Exhibit D11.4-1. (MDK)

16. The Hall Ditch (SEO Permit 5195), mapped in Section 11 of Exhibit D11.4.1, apparently provides irrigation water for hayfields in the NESE of Section 11 (30 acres) and the NWSW of Section 12 (22 acres). This water right does not appear in Addendum D11-4. Please add this water right to the Addendum and add the irrigated acreages to Exhibit D11.4-1. (MDK)

Section D11.6 Extent of Alluvial Valley Floor

17. Portions of Earley Creek and East Fork Earley Creek are within the AVF study area yet the permit application does not attempt to conclude if these streams contain AVFs. Presumably, the LQD will need to make an AVF finding on these streams. (MDK)

18. The first bullet for Slater Creek on Page D11-9 dismisses the positive identification of unconsolidated stream laid deposits because a layer of colluvial material was found over alluvial material. However, as stated in Appendix D5 on Page D5-8 and Page D5-9, sub-rounding of the clinker present in the cuttings suggests water driven deposition of limited extent. Also, as discussed in Comment No. 3, the application did not evaluate unconsolidated streamlaid deposits in a manner that is consistent with identification criteria listed in LQD Guideline No. 9. The application has not provided sufficient evidence that unconsolidated stream laid deposits are not present along Slater Creek. (MDK)

19. The third bullet on Page D11-9 for Slater Creek should be clarified that the width of **natural** flood irrigation in the valley is generally insufficient to provide for

economic agricultural practices. However, economic agricultural practices clearly occur immediately upstream of the proposed mine permit boundary because of **artificial** flood irrigation of hayfields adjacent to the channel. These practices are documented by existing water rights that are approximately 100 years old. Please revise this discussion. (MDK)

20. The fifth bullet for Hidden Water Creek on Page D11-9 seems to dismiss the positive identification of unconsolidated stream laid deposits because of colluvial material with shallow bedrock. However, as previously noted, this conflicts with information in the Big Horn Mine permit concerning unconsolidated stream laid deposits on Hidden Water Creek. (MDK)

Section D11.7 Mining of Alluvial Valley Floor

21. Although the LQD has not yet issued its formal finding, the segment of the Tongue River adjacent to the proposed permit area, which was not declared under previous LQD findings, likely contains an AVF.

(a) If this AVF is significant to farming, the applicant must comply with LQD Coal Rules and Regulations Chapter 3, Section 2(d)(ii) and demonstrate that the proposed mining operations will not materially damage the quantity and quality of water that supplies the Tongue River AVF. The absence of direct mining on the Tongue River AVF does not relieve the requirement of assessing the probable hydrologic impacts of the proposed operation to the AVF, particularly since the groundwater model in Mine Plan Addendum MP-3 predicts drawdown in the Tongue River alluvium. (MDK)

(b) Regardless of the significance to farming, the applicant must also maintain and/or restore the essential hydrologic functions of the Tongue River AVF. The applicant must therefore identify the essential hydrologic functions of the Tongue River AVF and either (1) provide an analysis that the proposed operation will not hamper the essential hydrologic functions, or (2) demonstrate that the essential hydrologic functions will be restored. The essential hydrologic functions for another part of the Tongue River AVF are described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27), so this may be a good starting point to consider. (MDK)

(c) A monitoring system is also required to demonstrate the essential hydrologic functions are maintained, as per LQD Coal Rules and Regulations, Chapter 5, Section 3(b)(ii). Since the groundwater model (Mine Plan Addendum MP-3) predicts 2.5 feet of drawdown in the Tongue River alluvium, the monitoring system may likely contain alluvial monitoring wells and periodic evaluation of color-infrared imagery. (MDK)

22. The essential hydrologic functions of the adjacent Goose Creek AVF must also be maintained during the proposed mining operation. The application needs to list these functions, as described in the Big Horn Mine Permit SDD (shown in

Brook Mine Appendix D11 on Page Addendum D11-2-27). A monitoring system is also required to demonstrate that the essential hydrologic functions will be maintained. (MDK).

<u>Mine Plan</u>
Section MP.20 Alluvial Valley Floors

23. The discussion of underground mining in AVFs does not seem necessary given there is no plans for underground mining at the Brook Mine. Furthermore, it is conceivable that circumstances could exist where underground mining of an AVF would not be allowed by the LQD. For example, if the AVF was significant to farming and underground mining of the AVF would result in surface effects such that material damage to the AVF would occur. (MDK)

<u>Reclamation Plan</u>
Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors

24. Assuming the Tongue River is an AVF, this section should discuss how the essential hydrologic functions will be maintained and/or reestablished, as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(ii). As noted in Comment No. 21, the essential hydrologic functions of the Tongue River AVF need to be identified and a monitoring system needs to be installed. (MDK)

25. As noted in Comment No. 21, the adjacent Goose Creek AVF also needs a monitoring system to demonstrate essential hydrologic functions are maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

26. This section may also need to be addressed if the LQD finds that other AVFs exist on or near the permit area. If AVFs are determined to be present, the essential hydrologic functions must be maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Matt Kunze, LQD Division Services

DATE: March 10, 2015

SUBJECT: First Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

As requested by your November 13, 2014 memorandum, I have performed a review of surface water items in the new Brook Mine permit application (TFN 6 2/025). I have reviewed Appendix D6 (Hydrology), Mine Plan, and Reclamation Plan. I have one comment for Appendix D10 (Wetlands). I also have some comments that were generated in advance of preparing the Cumulative Hydrologic Impact Assessment (CHIA) for the permitting action.

Items Requested in Electronic Format for Preparation of CHIA

1. Please provide a CAD or ArcGIS shapefile that contains the proposed permit boundary for the Brook Mine. This file will be used to prepare maps in the CHIA. This file can be emailed to: matthew.kunze@wyo.gov. (MDK)

2. Please provide the baseline surface and groundwater data collected to support baseline characterization for the permit application. All data can be submitted on Excel templates (Attachments) found on the LQD website for the Coal Annual Report Format (CARF): http://deq.wyoming.gov/lqd/coal/resources/annual-report-3/.

    - Please provide all surface water flow and water quality data for the following surface water stations: SM578415-SW-1, SM578409-SW-1, SM578418-SW-1, and SM578512-SW-1.

    - Please provide all groundwater level and water quality data for all Brook Mine monitoring wells shown in Table D6.2-1.

Appendix D6-Hydrology

Section D6.1.2 Drainage Basin Description

3. On Page D6-2 it is stated that Slater Creek is an ephemeral stream. Aerial imagery shows a riparian area with trees and subirrigation occurring along much of the channel. PEM wetlands are also present as documented in Appendix D10. It would seem that an ephemeral stream may not be able to support these features. Please provide the justification why Slater Creek is considered an ephemeral stream, and that the stream does not contain intermittent characteristics where it is not below the local water table for a portion of the year. (MDK)

Section D6.1.3.2 Flood Studies

4. The USGS operated a peak flow gage on Slater Creek from 1967 to 1981 (Station No. 06299900, http://nwis.waterdata.usgs.gov/wy/nwis/inventory/?site_no=06299900&agency_cd=USGS). The gage was located just downstream of the proposed permit boundary near the confluence with the Tongue River. Please incorporate the annual peak flow data from this station into the permit application to illustrate the range of peak flows that might be expected from Slater Creek. (MDK)

5. Some of the U.S. Army Corps of Engineers references cited in the text (2000, 2001) do not appear in the References Section (Section D6.3). Please add these to the references list. (MDK)

6. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section D6.3. (MDK)

7. Please explain in the text if the existing impoundments (stock reservoirs, old mine pits, etc.) in both the Slater Creek and Hidden Water Creek drainages were considered in the routing functions for the HEC-HMS runoff estimates. These features would likely have an effect on attenuating peak flows. (MDK)

8. As the text states on Page D6-5, the HEC-HMS runoff estimates in Table D6.1-7 are higher than the Miller (2003) equation estimates. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) equation estimates.

   The Miller (2003) equation for this region used, in part, data from the USGS peak flow gage on Slater Creek, so it would seem that the Miller (2003) estimates may be more reasonable. For example, compared to the HEC-HMS estimates, the 15-year record from the peak flow gage on Slater Creek would not register at anything greater than a five-year event. Furthermore, the May 18, 1978 event on Slater Creek resulted in a peak flow of 1,100 cfs, which according to the HEC-HMS estimates would only be around a 2-year event. USGS studies have shown that the May 1978 flood event was estimated to be a 100-year event on some

parts of the Tongue River in this area (http://pubs.usgs.gov/pp/1244/report.pdf). (MDK)

Section D6.1.5.1 Monitoring Stations

9. Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

10. On Page D6-8, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

11. On Page D6-8, second paragraph, it states that increased *E.Coli* from samples collected in 2006 were attributable to high flows in May-June 2010. Were the samples also collected in 2010 and not 2006? Please revise this sentence. (MDK)

12. On Page D6-8, second paragraph, it would be informative to add that, in addition to the SCCD, other entities such as the Big Horn Mine, USGS, and WDEQ/WQD have collected water quality data on the Tongue River and Goose Creek near the proposed mine. It may also be informative to mention that sections of the Tongue River in the vicinity of the proposed mine are on the State's 303(d) list since certain uses are not supported due to impaired water quality. Goose Creek has also been on the 303(d) list in the past and a TMDL has been prepared. Information can be found at: http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/ and http://deq.wyoming.gov/wqd/tmdl/. (MDK)

Section D6.1.5.2 Surface Water Quantity

13. The Big Horn Mine (WDEQ/LQD Permit 213) operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. This station was located approximately ¼ mile upstream from station SM578415-SW-1 that was installed by the Brook Mine. The LQD Hydrology Database contains mean daily flow data from this station from 1982 to 1997, although several years are missing data. Baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request or a more complete dataset may be available if requested from the Big Horn Mine. (MDK)

Section D6.1.5.3 Surface Water Quality

14. Please briefly discuss in the text the water quality results from Slater Creek in the context of WQD Surface Water Quality Standards for Class 3B waters (see Chapter 1 of WQD Rules and Regulations). This would reveal whether or not designated uses were being met prior to mining. The two samples from Slater

Creek indicate no exceedences of Class 3B criteria, indicating uses are supported. (MDK)

15. It is understood that water was not flowing in Hidden Water Creek so the applicant could not collect a sample for baseline purposes. However, as previously mentioned, the Big Horn Mine operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. The LQD Hydrology Database contains nine water quality samples collected at this site from 1979 to 1989. Baseline characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request. (MDK)

Section D6.1.5.4 Sediment Transport

16. This section would be enhanced by including data from a single sediment sample collected on Slater Creek at USGS Station No. 06299900 (peak flow gage previously discussed in Comment No. 4). This sample was collected in June 1967 at a flow of 18 cfs. The TSS was 11,600 mg/L and the suspended sediment discharge was 564 tons/day. (MDK)

Addendum D6-5 – Rating Curves

17. A rating curve developed using only the Manning equation will provide only a rough estimate of flows given the uncertainty in the Manning's roughness coefficient. It is recommended that direct discharge measurements also be taken over time to help evaluate the rating curves developed for the four monitoring sites. (MDK)

18. Given the uncertainty in the Manning equation, the estimated flow rates provided in Table D6-3 and Attachment D6-5-A (Rating Tables) are reported at much too high a level of precision to be meaningful. Depending on the magnitude of the flow estimate, there should be only one or two significant figures provided. For example, 0.29 cfs = 0.3 cfs and 3,584.38 cfs = 3,600 cfs. Please revise these tables. (MDK)

<u>Appendix D10-Wetlands</u>

Section D10.2 Results

19. The text may want to state when (what date) RAMACO requested the jurisdictional determination from the USACE, and include this request letter as an Addendum to Appendix D10. This would provide documentation that the request was submitted, as receipt of the USACE determination may lag behind the LQD permitting process. (MDK)

Mine Plan

Section MP.4.1 Mining Sequence

20. On Exhibit MP.4-1, please attempt to show the areas that would be highwall mined versus surface mined. These layers are currently not found until Exhibit MP.15-1. Alternatively, the text in this Section could specify that the areas to be highwall versus surface mined are shown in Exhibit MP.15-1. (MDK)

Section MP.5.1 Surface Drainage and Erosion Plan

21. Only Slater Creek and Hidden Water Creek are labeled and shown in Exhibit MP.5-1. In order to better evaluate the Hydrologic Control Plan, please provide labels and locations for the other stream channels, including Tongue River, Goose Creek, East Fork Earley Creek, and the other unnamed channels (as shown on the USGS 24K Quad) on the proposed permit area. (MDK)

22. Exhibit MP.5-1 shows overburden stockpiles OB-13 and OB-12, as well as topsoil stockpile TS-6, occurring directly over the Slater Creek channel. The Exhibit does not show any diversion ditches to be used in these locations. Please either move the location of the stockpiles or present a plan to use a diversion to route Slater Creek around the stockpiles. (MDK)

Section MP.5.2 Sedimentation and Wastewater Impoundments

23. Exhibit MP.5-1 shows the locations of two “sediment basins”. Are these considered the same as “sedimentation impoundments”, as discussed in this Section? If so, the designs for these two impoundments are not found within the Mine Plan. (MDK)

Section MP.5.3 Flood Control

24. This section discusses flood control reservoirs but it is not mentioned how many flood control reservoirs would be constructed and where their locations would be. Please provide this information to comply with LQD Coal Rules and Regulations, Chapter 2, Section 5(a)(i)(D)(IV). (MDK)

Section MP.5.4 Diversions

25. This section mentions permanent diversions, but there are no apparent plans for permanent diversions. Please discuss if permanent diversions are anticipated as part of the mining operation, or if all diversions will be temporary. (MDK)

26. Exhibit MP.5-1 shows only one diversion ditch for Hidden Water Creek in T57N, R84W, Section 9. Please discuss this particular diversion and its typical design in more detail in Section MP.5.4. (MDK)

Section MP.5.5 Culverts

27. Please provide a brief statement that commits to a periodic culvert inspection and maintenance plan to ensure that culverts will function properly over time. (MDK)

Section MP.5.8 Mine Pit Dewatering Plan

28. The first sentence references a sedimentation reservoir. Where is the location of this sedimentation reservoir? Are these the "sediment basins" shown in Exhibit MP.5-1? If not these sedimentation reservoirs need to be added to this Exhibit. (MDK)

29. The first paragraph references treating and discharging pit water. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Section MP.6.1 Surface Water

30. Exhibit MP.1-1 shows surface disturbance directly over a few areas of Slater Creek and Hidden Water Creek. Please identify the source of disturbance in these areas. Direct disturbance of the channel should be avoided unless there is a plan for a diversion to route the stream around the disturbance. (MDK)

31. The mining trenches are often discussed with reference to Exhibit MP.1-1. However, the trenches are not shown on this Exhibit. Please add the locations of the trenches to Exhibit MP.1-1. (MDK)

32. On Page MP-39, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining disturbance will be treated prior to discharge. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

33. Please discuss the diversion ditch for Hidden Water Creek in the first carryover paragraph on Page MP-39. (MDK)

34. On Page MP-40, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining activities will be treated prior to discharge. Please reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

35. On Page MP-40, there is a sentence: “The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility”. This statement is unclear. Are the impacts to the actual Slater Creek channel or the uplands and other tributaries in the watershed? Is it *reduced* ground cover and *increased* soil erodiblity? Please provide a more explicit description of the possible impacts. (MDK)

36. Please provide a discussion on whether the proposed mining operation would affect surface water quality such that designated uses would be affected on the major streams on and adjacent to the proposed permit area. (MDK)

37. The text describes possible reductions in peak flows and storm volumes. Please describe in the PHC if the proposed mining operation will have any effects on nearby or downstream surface water rights. (MDK)

38. Please add a brief statement to the PHC that if it is determined that the mining operation affects a surface water right, that water right would be replaced with a water source of similar quantity and quality as provided by W.S. § 35-11-415(b)(xii). (MDK)

Section MP.6.1.1 Land Erosion Stability

39. It is unclear the intent of this section. It seems to be out of place in the mine plan, as it discusses the USLE in the context of only native and reclaimed conditions. Furthermore, no data other than the K factors are presented in Mine Plan Tables (Table MP.6.1). The Reclamation Plan also does not discuss applying the USLE, so it would seem that Section MP.6.1.1 should be removed unless a USLE analysis is completed of pre- vs during- vs postmine erosion predictions. (MDK)

Section MP.7.1 Surface Water Monitoring

40. It is unclear why reservoirs will be monitored in the operational monitoring program when these features were not sampled for during baseline characterization. If the reservoirs have the potential to be affected by the mining operation they should be sampled prior to mining with this information presented in Appendix D6. (MDK)

41. Please add the reservoir monitoring locations listed in Table MP.7-1 to Exhibit MP.7.1. (MDK)

42. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

43. Please identify what type of water quantity data will be generated from the continuous stage monitoring. For example, will mean daily flow rates and/or

peak daily flow rates be estimated, as these would likely be submitted to the LQD in the Annual Report? (MDK)

44. The text in the last paragraph on Page MP-45 states that water quality samples will be collected from a single station using an ISCO automatic sampler. Please identify in the text which station this is. Also, please explain the rationale for using an ISCO sampler at only one of the four stream monitoring sites. (MDK)

45. The text in the first paragraph on Page MP-46 states that data will be evaluated to determine if any surface water and groundwater interactions exist. It would seem that any interactions should have already been identified during the baseline characterization of the hydrological system on and near the proposed permit area. It does not appear that the permit application discusses surface/groundwater interactions. (MDK)

Section MP.8 Water Use

46. Please state in the text that all water from surface reservoirs or wells will be used under appropriate permits from the State Engineer's Office (SEO). (MDK)

47. It is advised that the applicant discuss with the SEO-Interstate Streams Division any implications that water use may have under the Yellowstone River Compact. (MDK)

<u>Addendum MP-6 Subsidence Control Plan</u>

Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation

48. The text states that subsidence monitoring would be discontinued if no evidence of subsidence occurred after six months after highwall mining. Please include a clarifying statement that the applicant would remediate subsidence up until bond release is approved, even if the subsidence was detected later than the six months of initial monitoring. (MDK)

<u>Reclamation Plan</u>

Section RP.3.3 Postmine Slope Analysis

49. Please provide a discussion that compares the pre-mine vs. post-mine slope characteristics. A table would be helpful that compared the minimum, maximum, and average slopes under pre-mine and post-mine conditions. (MDK)

Section RP.3.5 Drainage Reestablishment

50. It is stated that mining will disturb portions of the Slater Creek channel and the reclamation will entail reconstruction. However, the Mine Plan PHC (Section

MP.6.1) stated that Slater Creek "will still flow naturally around the trench", and "Because Slater Creek's flow will not come into contact with mining activities, no impact will be made to water quality". Please provide a clear and explicit description of the extent of direct disturbance to the Slater Creek channel. This description should be consistent between the Mine Plan and Reclamation Plan. (MDK)

Section RP.4.2 Mitigation of Unsuitable Material

51. Minor channels are defined as ephemeral streams but there is no definition provided for "major channels". Please provide a definition and also illustrate an example of a major channel within the proposed permit boundary that would fit into this category. (MDK)

Section RP.5.6 Erosion Control and Conservation Practices

52. The first sentence of the second paragraph…"Rills and gullies…" needs revised, as it appears to be missing one or more words. (MDK)

Section RP.7.4 Aquatic Habitat

53. The second sentence discusses stockponds possibly being disturbed by mining activities. The Mine Plan PHC did not mention that any existing stockponds would be disturbed by mining activities. If stockponds are to be disturbed by the mining operation, this should be discussed in the Mine Plan PHC. (MDK)

54. The text states that two additional postmine impoundments will be constructed and their location is shown in Exhibit RP.3-1. This Exhibit shows <u>ten</u> permanent impoundments, both on and adjacent to the proposed permit area. Please revise this discrepancy in the text or change the symbology in the Exhibit to clearly show the two permanent post-mine impoundments. (MDK)

Section RP.8.1 Drainage Basin Reconstruction

55. Please add the major stream name labels (Tongue River, Goose Creek, East Fork Earley Creek, Slater Creek, Hidden Water Creek) to Exhibit RP.8-1. (MDK)

56. Please explain in the text how the postmine drainage basin parameters in Table RP.8-1 were determined. (MDK)

57. The text states that a comparison of drainage basin parameters in Table RP.8-1 and Exhibit RP.8-1 show that the overall hydrologic balance will remain largely unchanged. This conclusion is not obvious from the Table and Exhibit. How similar are the postmine drainage basin parameters to the pre-mine parameters? Which sub-drainages show the largest change from pre-mine conditions? The text needs to include a more thorough discussion to demonstrate to the reader why exactly the postmine hydrologic balance will be unchanged. (MDK)

Section RP.8.1.1 Discharge Estimates

58. The text provides no discussion of the comparison between the pre-mine and postmine modelled discharge values. Please provide this discussion so the reader can determine if the differences are minor or major. (MDK)

59. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section RP.17. (MDK)

60. Similar to Comment No. 8 made for Appendix D6, the HEC-HMS runoff estimates in Table RP.8.4 are much higher than the Miller (2003) equations. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) regression equations.

Section RP.8.1.2 Channel/Floodplain Design

61. The last sentence in the first paragraph states that stream reaches for which designed cross sections are provided are identified in plan on Exhibit RP.8-1. There is nothing on this Exhibit that shows which stream reaches have designed cross sections, nor which stream channels are being reconstructed. Please clearly identify this information on this Exhibit. (MDK)

62. Exhibit RP.8-2 shows that the main Slater Creek channel will not be disturbed. Please consider this in light of Comment No. 50 that requested clarification on the extent of disturbance to the Slater Creek channel. (MDK)

63. On Page RP-35, second paragraph, it references “reclaimed Slater Creek channel” and channel hydraulics are presented in Table RP.8-5. It is not clear why channel hydraulics are presented for Slater Creek when it will not be disturbed. Is this because reclaimed tributaries to Slater Creek are changing such that the main channel of Slater Creek is expected to be change? Please clarify this in the text. (MDK)

Section RP.8.2 Permanent Impoundments

64. It is unclear exactly how many new postmine impoundments will be constructed. Table RP.8-6 identifies two impoundments (Enhancement Stock Pond 1 and Replacement Stock Pond 1), and these are shown in Exhibit RP.3-1. Exhibit RP.3-1 shows eight other permanent impoundments. Please identify if these are new features to be constructed or if they are existing stockponds that may be affected by the mining operation. (MDK)

65. Please identify in this section if there will be a net increase or decrease in post-mine water storage capacity relative to pre-mine capacity. (MDK)

66. As mentioned Comment No. 47, it is advised that the applicant discuss with the SEO-Interstate Streams Division any implications for the Yellowstone Compact if new water storage features are proposed that potentially decrease water quantity to the Tongue River. (MDK)

Section RP.8.4.2 Surface Water Monitoring

67. The text on Page RP-40 states that the surface water monitoring stations are shown on Exhibit RP.8-4. However, the stations are not shown on this Exhibit. It may be make the most sense to add these to Exhibit RP.8-5 and rename the Exhibit "Postmine Hydrologic Monitoring Locations" so the surface water stations and monitoring wells are on one Exhibit. (MDK)

Section RP.8.4.3 Postmine Impoundments

68. The text on Page RP-41 states that water quality samples will be collected at each of the postmine impoundments listed in Table RP.8-6 and presented on Exhibit RP.3-1. Please clarify in the text that this sampling list includes all ten impoundments shown. (MDK)

69. Please add the list of impoundments to be sampled to Table RP.8-9 "Surface Water Monitoring Sites". (MDK)

70. The postmine impoundments to be sampled appears to be slightly different from the impoundments listed in Mine Plan Table MP.7-1 "Operational Surface Water Monitoring Locations". Table MP.7-1 lists three impoundments (Hall Reservoir, Black Mountain No. 1 Stock Reservoir, and Legerski Bros #1 Stock Reservoir) that are not listed as postmine impoundments to be sampled. Please explain why there is a difference in the operational monitoring and postmine monitoring of some impoundments. (MDK)

71. In the second full paragraph on Page RP-41, "The water quality samples.." please also state that the water quality samples will be compared against WDEQ/WQD Class III groundwater standards, as suggested by LQD Guideline No. 17 for replacement and enhancement stockponds. (MDK)

Section RP.8.5.2 Surface Water

72. At the end of the first paragraph on Page RP-44, it predicts a "slight change" in event peaks and volumes. Please further discuss what is meant by a "slight change", i.e., what is the magnitude of the increase or decrease? (MDK)

73. In the second paragraph on Page RP-44, please clarify the extent of direct mining disturbance to Slater Creek versus tributaries of Slater Creek. This comment relates to previous Comments No. 50 and 62. (MDK)

74. Please provide a discussion as to whether the planned postmine impoundments will affect surface water quantity on or downstream of the proposed permit area. (MDK)

Section RP.9.1 Introduction

75. The second paragraph references Appendix D8. Should this be Appendix D10 (Wetlands)? Please revise this if necessary. (MDK)

76. Please add a statement up front in the Wetland Mitigation section that the USACE has not yet issued a jurisdictional determination for the proposed Brook Mine. Please also provide a statement in the text that the information in Section RP.9 may be subject to change pending the USACE determination. The USACE jurisdictional determination should also be incorporated somewhere into the Mine Permit once that is received by the Brook Mine. (MDK)

Section RP.14 Bond Release

77. The LQD no longer requires a bond release verification for “sediment control release”. This is now termed “surficial stability verification”. More information is available in LQD Guideline No. 23. Please revise the text for this change. (MDK)

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Muthu Kuchanur, LQD Division Services

DATE: March 10, 2015

SUBJECT: First Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

As requested by your November 13, 2014 memorandum, I have performed a review of groundwater items in Appendix D6, groundwater sections in mine plan and reclamation plan of the new Brook Mine permit application (TFN 6 2/025). In addition, I have provided a few comments on Appendix D5 for your consideration.

Appendix D5

Section D5.3.3.2 Overburden and Interburden

1. This section provides a discussion of the thickness of interburden and not overburden. Please provide a discussion (or a reference) on the thickness of the overburden. (MK)

Section D5.3.3.3 Coal

2. On Page D5-10, there is a good discussion about the thickness of the two coal seams. Please provide a description on the depth from land surface to these coal seams. (MK)

Section D5.3.3.3 Coal

3. Page D5-10 states, “Monarch seam exist within isolated portions of the mine areas as shown on the geologic cross sections in Addendum D5-3 and may present a secondary target.” However, Table D5.3-2 does not provide the coal quality characteristics for Monarch coal seam. If monarch seam is part of the mine plan, please include the coal quality characteristics of Monarch coal seam in Table D5.3-2 and a description of thickness and depth from land surface.

4. Please include a discussion on Dietz (1, 2, 3) coal seams, if they are present in the mine permit boundary. If they are part of the mine plan, please include the coal quality characteristics in Table D5.3-2. (MK)

Section D5.3 Geology of Mine Area

5. Please provide a description of the stratigraphic units below the Masters coal seam. (MK)

Addendum D5-3 Geologic Cross Sections

6. Several of the geologic cross sections show UNK – unknown coal seam (Stringer). Please include a brief discussion about this stringer in Section D5.3.3.3 (MK)

Addendum D5-4 Isopachs

7. Please include the wells/drill holes (control points) used to interpret the isopachs and elevation contours in the maps. In addition, label all the control points with names and the thickness (or elevation, as appropriate). This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table

8. Please describe these analyses, methodology, results and provide an interpretation of their applicability to the mine/reclamation plan. (MK)

<u>Appendix D6</u>

Section D6.2.1 Regional Hydrogeology

9. Page D6-12 states, "The potential groundwater in the formation as capable of yielding small quantities of water for domestic and stock use". Please consider providing a range of estimates for well yields based on literature review or from the baseline data collected by the Brook Mine. (MK)

10. The description in this section discusses only about the Fort Union formation. Please provide a description of the overlying and underlying water-bearing formations (aquifers) and describe their hydrogeologic characteristics (flow direction, gradients, aquifer properties, general outcrop locations) on a regional context. It is noted that some of the overlying formations may be dry or discontinuous within the mine permit boundary. (MK)

11. Page D6-12 states, "The overburden is comprised of sand lenses, clinker and alluvial that have the potential of water bearing bodies. Due to the topography in this area, the valley cut through these deposits. Therefore, they are discontinuous and would not hold large quantities of water." It is noted that they are discontinuous and would not hold large quantities of water. Please provide additional justification for this statement by using the hydrogeologic data

collected by the Brook Mine including any reference to the interpreted extent of dry zones based on drill holes, monitor wells and other applicable data. (MK)

12. Please clarify if there were groundwater springs or seeps observed in the areas within or adjacent to the mine permit boundary. Include a discussion (or reference) on the surface water - groundwater interactions.(MK)

Section D6.2.2.1 Monitor Well Construction, Completion and Development

13. Page D6-13 states, "No monitoring wells were completed in the overburden or interburden as no water was found in these units during drilling operations". This information is critical in demonstrating the overlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (both overburden and interburden) and their depths that were used to make this determination. (MK)

14. Page D6-13 states, "Also one well 578409-MST-UB showed the presence of water in the underburden, while all the other wells drilled into the underburden were dry and therefore not completed as wells." Similar to the previous comment, this information is critical in demonstrating the underlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (underburden) and their depths that were used to make this determination. (MK)

Section D6.2.2.2 Aquifer Tests

15. Page D6-15 states, "Alluvial materials were also not analyzed during the aquifer testing." The alluvial aquifer materials are one of the key factors in determining any impacts caused by mining to the alluvial aquifer. Alluvial aquifer tests will be helpful in understanding any surface water – groundwater interactions. Please provide justification for not conducting any aquifer tests in the alluvial wells. (MK)

16. Please provide justification for not observing the groundwater level reponses in the alluvial aquifer during the two aquifer tests conducted by Brook mine. (MK)

17. Page D6-16 states, "A report of these tests can be found in Addendum D6-8 and summary tabulation of the aquifer test results is included in Table D6.2.2". Please consider including a comparison of these estimated aquifer properties with the aquifer tests conducted in other similar coal seams in the Powder River Basin (Example: Bighorn Mine). Given the number of tests conducted by the mine, this will increase the robustness of the reported estimates from the two aquifer tests. (MK)

18. It is noted that the aquifer tests were conducted for ~640 minutes. Will an increased aquifer test duration change the observed lack of interaction between

the coal seams and the underburden? Please clarify with a brief description. (MK)

19. The referenced Addendum D6-8, Table D6-2 shows an increase in water levels in two of the Carney coal seam observation wells during the Masters coal seam well pumping test. Please provide an explanation for this increase in water levels during the aquifer test. (Noordbergum effect?). (MK)

20. Please provide a discussion (or reference) on the role of faults in the results of aquifer tests. (MK)

Section D6.2.2.4 Premining Potentiometric Surface

21. Please provide some additional discussion on the premining potentiometric surface maps, including ranges of estimated hydraulic gradients and groundwater velocity in the different coal seams/aquifers. (MK)

22. Please provide a discussion (or reference) on the hydrologic effects of any adjacent operations (including past coal mining activity by historic mines and Bighorn mine) on the premining information and data. (MK)

Section D6.2.2.5 Recharge and Discharge Areas

23. This section provides a good discussion on the recharge areas. However, please clarify if there are any discharges from the coal seams within the permit boundary. (MK)

24. Please provide a range of estimates for recharge from precipitation to the aquifers within the permit boundary. Also, provide a discussion if this is the primary recharge mechanism for the aquifers within the permit boundary. (MK)

25. Consider providing a description of the soil properties within the permit boundary and the use of these percent soil distributions in the discussion of infiltration within the permit boundary. (MK)

26. Page D6-18 states, “Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-8”. Please revise this statement to reference the correct addendum - Addendum D6-9. (MK)

Section D6.2.3 Baseline Water Quality

27. Page D6-20 states, “A piper diagram of the groundwater wells with measured values is presented in Figure D6.2-1. Please provide a discussion on the water quality types observed at each aquifer (Example: Is the water quality type

variable within an aquifer? If yes, explain the potential reasons for this observed variability) based on the piper diagram. (MK)

28. Page D6-20 states, “The constituents that most frequently exceed the standard concentration limitations are ammonia, TDS, sulfate and manganese”. Please clarify if these constituents exceed the Chapter 8 standards at *all* the monitor wells. (MK)

Section D6.2.4 Groundwater Rights

29. Page D6-20 states, “Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume.” Cheyenne copy of the TFN does not have a sheet separator and a tab for Appendix E2 in the Adjudication volume. Please provide a sheet separator and tab for Appendix E2. (MK)

30. Page D6-20 states, “Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume.” Please provide a summary discussion/statistics on (i) total number of water rights, (ii) number of wells, (iii) aquifer, (iv) permitted water use and other relevant summary statistics. (MK)

31. Please provide a discussion (or reference) on the premine groundwater use (including the uses reported to SEO) within the permit boundary and the adjacent areas. (MK)

Mine Plan

32. Please provide an electronic copy of the groundwater model referenced in Addendum MP-3. In addition, please provide the GIS projection coordinate of the model files that will enable the LQD to plot the model results in GIS for the purposes of producing the CHIA (Cumulative Hydrologic Impact Assessment). The LQD review of the model files might potentially generate additional comments, clarifications or questions. (MK)

MP.1.1 Type of Mine

33. Page MP-1 states, “Below the Tongue River Member is the Lebo shale member of the Fort Union Formation which contains the Masters Seam (Cardno MM&A, October 2013).” This statement is not consistent with Table D5.3-1, Page D5-T1 and other descriptions in Appendix D5. Table D5.3-1 indicates Masters Coal seam is in the Tongue River Member. Please clarify and make appropriate changes throughout the submittal (Example: MP 4.4). (MK)

34. Major coal seams on the Brook Mine include: Dietz (1,2,3), Monarch, Upper Carney, Lower Carney and Masters.”. Dietz (1,2,3) coal seam is not included in the description presented in Section D5.3.3.3, Appendix D5. Please clarify: (i) the

seams that will be mined by the Brook Mine and (ii) include the description of all the coals seams as appropriate in Appendix D5 and Appendix D6. (MK)

MP.5.8 Mine Pit Dewatering Plan

35. Consider using the groundwater model referenced in Appendix D-3 to provide a description for a range of estimates on anticipated dewatering rates/volumes and groundwater inflows to the mine pit. (MK)

36. Please clarify the anticipated effects of the faults on the dewatering plan or groundwater impacts during mining. (MK)

MP.5.9 Dewatering Wells

37. Please provide a brief discussion on the anticipated quality of groundwater removed at various stages of mining. (MK)

38. If groundwater is discharged into a stream channel, anticipated discharge flow rate, water quality, and estimated seasonal discharge of the groundwater should be tabulated. The availability and suitability of this water for downstream water users should also be evaluated. Please clarify if this is an expected mechanism to discharge pumped groundwater. (MK)

MP.5.8 Groundwater Rights

39. Please include a description on any expected degradation of groundwater quality caused by the mining operation (including lateral flow through spoils) in the adjudicated wells. (MK)

MP.6.2.Groundwater

40. Please provide a brief discussion on any hydrologic effects caused by anticipated changes in recharge to the aquifers during mining. (MK)

41. Please provide an assessment of any subsidence effects (Addendum MP-6) on the hydrologic system during operations. (MK)

42. Please discuss if there are any expected impacts on groundwater quality caused by subsidence. (MK)

MP.6.3.2 Plan to Mitigate the Impacts on Groundwater

43. If the quality or quantity of adjudicated water supplies are affected, then an alternative source should be identified as part of the mitigation plan. Please provide a statement to meet this statutory requirement (W.S. § 35-11-415(b)(xii)). (MK)

MP.7.2 Groundwater Monitoring

44. Please clarify the lack of any shallow monitor wells near Hidden Water Creek, Goose Creek and Tongue River alluvium and if this will be an impediment to completely characterize the groundwater impacts during mining. (MK)

45. Please clarify the possibility of any of the monitor wells shown in Exhibit MP.7-7 being discontinued due to any constraints in the proposed-mine plan (example: mined through). (MK)

MP.8 Water use

46. Page MP-47 states, “Industrial water will be obtained from groundwater wells or from water collected in sediment and flood control reservoirs.” Please clarify if the groundwater wells mentioned in this statement are wells that will be exclusively used as industrial supply wells or if they are same as dewatering wells. (MK)

47. Page MP-48 states, “It is estimated that the total water use will be approximately 400 million gallons per year.” Please provide a discussion comparing the reported water use by other mines of similar size in the Powder River Basin.

48. Page MP-48 states, “It is estimated that the total water use will be approximately 400 million gallons per year.” Please provide a comparison of this estimated total water use against the various estimated water sources available during mining (Example: from dewatering wells). It will be very helpful to provide a discussion on contingency measures during extreme wet/dry years or if the proposed mine plan does not require extensive dewatering. (MK)

49. Please clarify if there is any expected variability in this projected water use (example: is it closely related to the mine plan). (MK)

Addendum MP-3 Groundwater Model

50. Page Addendum MP-3-19 states, “Since, most of the wells within the modeled domain are stock wells with intermittent pumping and completed in geologic strata below the Masters Coals, they are relatively inconsequential to the groundwater system modeled in this report.” Please provide a Figure (or reference) to show these wells, their depths and discuss on why they are hydrogeologically isolated from the effects of the proposed mine. (MK)

51. Page Addendum MP-3-20 states, “The faults are significant in lateral extent and form natural no flow boundaries”. Please provide a discussion (or refer to a discussion) on how these faults were determined to be no flow boundaries. (MK)

52. Please clarify the reason for not estimating vertical hydraulic conductivity of the interburden using an aquifer test. (MK)

53. Page Addendum MP-3-25 states, “With no unnatural stresses on the system …” Please provide a discussion of the CBM impacts on the water levels. It appears that the hydrographs presented in Appendix D6 do not show the impacts of CBM. (MK)

54. There are two sub-sections for recharge, Section 2.5.3 and Section 2.6.1. Please clarify/consolidate. (MK)

55. Page Addendum MP-3-26 states, “… drain cells were placed in the model to simulate seeps from the outcrops.” Please provide a discussion on the evidence for seeps (or reference) observed during field surveys. Were there any field data collected on the location and flow rates of these seeps? (MK)

56. Page Addendum MP-3-27 states, “River cells from MODFLOW’s river boundary conditions package were placed in the model to simulate the Tongue River and Goose Creek.” Please provide a conceptual discussion supported by field observations on the type/nature of interaction of these streams with groundwater (Gaining stream vs. losing stream). (MK)

57. Please provide a discussion on any contribution of groundwater baseflow to the major surface water bodies within the permit boundary. (MK)

58. In section 3.2 MODFLOW Input Files, was aerial recharge used as an input file? Please clarify if evapotranspiration was considered as a discrete input or lumped into net aerial recharge. (MK)

59. Page Addendum MP-3-31 states, “Layer 1 – represents the coal overburden”. Please clarify if the alluvial aquifer was included in the model. Please provide justification for not considering the alluvial aquifer in the model. (MK)

60. Page Addendum MP-3-31 states, “Layer 3- Carney Interburden. This interval is generally of low to very permeability in the western portion of the Project Area”. Please clarify how the areas where Layer 3- Carney Interburden is absent are treated in the groundwater model. (MK)

61. Please include a discussion of the thickness of *all* model layers. (MK)

62. Please include a justification for not considering the underlying zones beneath the Masters coal seam in the model. (MK)

63. Please provide appropriate cross section(s) of the model grid overlaid with the drill hole data collected during baseline characterization. This will help the

evaluation of the adequacy of model layer thicknesses against the stratigraphic field data. (MK)

64. Please clarify how the layers were modeled to represent the confined/unconfined aquifer types. (MK)

65. In addition to model calibration, please provide justification for the recharge rates applied in the model including any literature references. (MK)

66. Page Addendum MP-3-33 states, “Recharge is applied within the modeling software by applying the recharge to the highest active layer.” Please clarify the presence of any modeled ‘dry cells’ in the model and the influence of applying the recharge to the layers below the dry cells. (MK)

67. Table 4.2-3. lists model porosity values. Typically, MODFLOW (flow model) does not use porosity in its calculations. Please clarify the need for this input parameter. (MK)

68. The faults are not modeled in Layer 1. Please clarify the procedure for determining the vertical extents of the faults in the model. (MK)

69. Please provide the input parameters used to model the horizontal flow barriers in the model and discuss their technical reasonableness. (MK)

70. Page Addendum MP-3-40 states, “As the current, post-CBM potentiometric surface is considered the static level……..” Please provide the implications of this assumption, on the model calibration of hydraulic parameters and the mode predicted hydrologic impacts (over estimation of drawdown vs. underestimation) (MK)

71. It is noted that Table 4.7-1 summarizes the calibration residuals and statistics from the calibrated model. Please consider providing additional presentations of the calibrated model statistics. This will enable an easier evaluation of any spatial bias in the model calibration. (MK)
    a. X-Y plot of observed vs. simulated water levels.
    b. A map plotting the residuals to show the spatial distribution
    c. Provide a summary statistics table with Mean Error, Mean Absolute Error, Sum of Squared residuals for the calibrated model. It is noted that some of these values are presented in the sensitivity analysis. However, a compiled summary statistics table would be very helpful.

72. In addition, to the measured water levels, please clarify if there were any flow measurements used for model calibration. (MK)

73. Please provide a water budget table (in acre-feet per year or cubic-feet per day) showing all the inflows into the model and outflows from the model.

74. Please provide a comparison of model simulated inflows and outflows against conceptual estimates of inflows and outflows. This comparison will act as another verification/check for the technical adequacy of the groundwater model (Example model GHB flows vs. reasonable estimated conceptual flows). (MK)

75. Page Addendum MP-3-40 states, “Due to a system of thin aquifers with similar sources and sinks and homogeneous hydraulic conductivities, the head values of the steady-state model were nearly identical between the separate coal layers as noted in Table 4.7-1.” Please clarify whether this statement implies that the interburden (where present) between the coal seams is not a confining unit. (MK)

76. In figures 4.7-1, 4.7-2 and 4.7-3, please consider including the observed/interpreted water level contours and the measured water level elevations. This will enable to visually evaluate the observed vs. simulated water levels. (MK)

77. Page Addendum MP-3-45 states, “…….and if CBM production ceases, recovery rates will likely be higher than estimated in the model.” Please clarify if this statement implies that currently, there are CBM wells that are operational in the area and are pumping out groundwater. (MK)

78. Please consider removing the model sensitivity to storage coefficients and porosity. *Steady state* groundwater model equations do not include these parameters in any of the model calculations. (MK)

79. Please clarify if the faults in the model and their parameters were considered in any of the sensitivity analyses. If not, please consider performing a detailed and thorough sensitivity analysis, as the faults appear to influence the drawdowns simulated by the groundwater model. (MK)

80. In addition to the simulated drawdown maps, please consider providing hydrographs at strategically selected locations. This will enable a better presentation of the impacts over time. (MK)

81. Please clarify if the three wells listed in Table 4.9-1 are the only wells considered for the analysis. Also, provide a discussion on the methodology to narrow down the analysis from several wells shown in the groundwater rights maps to these three wells. (MK)

82. Please provide (or reference) a discussion about the three wells listed in Table 4.9-1, their depths, screened intervals and other pertinent information. (MK).

83. Page Addendum MP-3-60 states, “ To measure the impacts to the Tongue River and Goose Creek, a series of targets were placed along these drainages in Layer

1" Please define the term target. Also, clarify if these targets are located in the alluvial aquifer. (MK)

84. Page Addendum MP-3-60 states, "These targets demonstrate that the estimated maximum impact to Tongue River Alluvium is conservatively estimated to reach 2.5 feet drawdown near the river." Please expand the discussion on the impacts to surface water flows including translating the drawdown to an estimated decrease in the groundwater baseflows to Tongue River and Goose Creek. (MK)

85. Please provide a statement on any hydrologic impacts predicted by the groundwater model to areas outside the Brook mine permit boundary. (MK)

86. Please provide a discussion on the simulated impacts caused by mining to surface water – groundwater interaction within the model domain. (MK)

87. Please compare the model simulated water balance between pre-mining, during mining and post mining conditions. Consider including a table that presents the water balance during select periods showing the flows from all sources and discharges to all the sinks within the model domain. Provide a detailed discussion addressing any changes in the model simulated water balance between pre-mining, during mining and post mining conditions. (MK)

88. In addition to the maps presented on the recovery estimates, please provide hydrographs at strategically selected locations. This will enable a better presentation of recovery over time. (MK)

89. The modeling documentation lacks discussion on the backfill aquifer. In the recovery model, please clarify how the model treats the backfill aquifer (spoils aquifer) and its resaturation. Please provide a discussion (or reference) to the hydraulic properties of the backfill materials used to create the backfill aquifer and the aerial extent of the backfill aquifer. (MK)

Addendum MP-6 Subsidence Control Plan

90. Figure MP6.1-1 shows "Monarch Seam Surface Only Mining". Please clarify if the Monarch seam is targeted for mining in the appropriate sections of Appendix D5, Appendix D6 and mine plan. (MK)

<u>Reclamation Plan</u>

RP 8.5.3 Groundwater

91. Section 8.3, page RP-38 states, "The estimated Postmine Potentiometric surfaces for the reclaimed aquifer for the Masters and Carney Seams are presented respectively in Exhibit RP.8.3 and Exhibit RP.8-4. Please provide a summary comparing and contrasting the premine potentiometric surfaces vs.

post mine potentiometric surfaces. This comparison should also consider any changes in the hydraulic properties (hydraulic conductivity, storativity, recharge capacity) of the premine aquifers vs. post mine aquifers. (MK)

92. Please discuss any changes in the interaction between the surface water and groundwater systems from the premining through the postmining phases of the operation. (MK)

93. Please discuss the intersection of the postmining topographic and potentiometric surfaces and their effects on the location and size of groundwater-fed water bodies. (MK)

94. Section 8.5.3, page RP-46 states, “These water quality changes can be qualitatively predicted from the overburden mineralogy and projected post mine hydrology.” Please expand this discussion on projected groundwater quality. Provide a discussion on the estimated/ projected post mining groundwater quality. A detailed description of potential changes in water quality from flow through backfill/mined out areas should be included. Any potential changes to water quality in adjacent aquifers should be discussed with respect to the potential for offsite material damage. (MK)

95. Please provide a discussion on any anticipated water use during the reclamation period. (MK)

96. Please address (or reference) any expected post-reclamation subsidence effects on the hydrologic system (both quantity and quality) and the plan to minimize these effects. (MK)

MEMORANDUM

TO: File, Brook Mining Co., LLC, Brook Mine, TFN 6 2/025

FROM: Stacy Page

DATE: January 28, 2014

SUBJECT: Review of Permit Application for Brook Mine, TFN 6 2/025

Appendix D-1.

1. Exhibit D1.1-1. The landuses defined in Chapter 1 should be used on this Exhibit. Not the entire Brook Mine Permit falls neatly into these definitions so the following comments provide guidance:

   a) The railroad, primary roads, oil and gas wells, and the facilities for Taylor Quarry would be considered Industrial commercial and may be shown with the vertical line stippling. The rest of the vertical stippling should be removed.
   b) The 4.5 acres of Agricultural lands would have the Land use of Cropland. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no changes are needed to the map for this land use.
   c) The 12.8 acres of water might be listed under multiple landuses such as Grazingland, Fish and Wildlife habitat or Recreational. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no change is needed to the map for this land use.
   d) The 4,421.8 acres remaining should be shown as Grazingland and Fish and Wildlife habitat. The legend on the map should have Fish and Wildlife Habitat added to Past and Present Grazingland landuse. The stippled area on the map will stay the same.
   e) No changes are needed to the areas identified as Recreational.

2. Text that refers to the areas mined as Industrial commercial should be revised to remove the mining. A reference to Section 1.6 on historic mining can be made in Section D1.3.1. Grazingland. The reclaimed mined lands are now being used as Grazingland. The difference between the mined and never been mined is defined as the vegetation community that is called Reclaimed. Section D1.6 discusses the historic mining of the area and the discussion on coal mining in Industrial commercial (D1.4.3) can be removed.

Appendix D-8 Vegetation Baseline

3. Page D8-3. Section D8.1.7. Guideline 2 is a non coal guideline. Please revise this sentence to reference the equation shown in Section D8-1.2.9 Sample Adequacy.

4. Page D8-4. Section D8.1.8. Please revise the second sentence to, "The EXREFA is all of the unaffected area for each native vegetation community."

5. Page D8-1-8. Section D8-1.2.4. The last sentence in this section states that no sample locations occurred within the Brook Mine Permit Area. AG-13, 14, 17 and 25 are shown on Addendum: D8, Map 1 inside the permit area. Please correct this statement or the permit boundary on the Map.

6. Page D8-1-11. Section D8-1.2.8. The last sentence of the first paragraph should be revised to, "Sample adequacy was not required for species diversity and composition."

Reclamation Plan

7. Page RP-13. Section RP.6.2.6. In the last sentence please add that substitutions to the seed mix will be made only with WDEQ approval.

8. Page RP-16. Section RP.6.4.1. To demonstrate that all of the unaffected acres of each vegetation community are sufficient for an extended reference area please create a table with total acres and affected acres and reference this table in this section.

9. Page RP-17. Section RP.6.4.1. Please add to the Ch. 4 reference in the first sentence on this page that the Handbook of Approved Sampling and Statistical Methods for Evaluation of Revegetation Success on Wyoming Coal Mines.

10. Page RP-17. Section RP.6.4.1. Please remove the first sentence in the third paragraph. It appears in conflict with the next sentence which cites Ch. 4.Sec. 2(d)(ii)(B).

11. Page RP-19. Section RP.6.4.5.1. Please add a third sentence to the first paragraph to Pastureland land use with a full shrub density greater than 1 shrub/m^2 is also eligible.

12. Page RP-24. Please revise the sentence after the ● Shrub density bullet to "Additionally, a species list will be prepared" and delete the remainder of the sentence.

13. Page RP-25. Section RP.6.7.3. Under Sampling Frequency in Guideline 14 the third sample may be included as part of your revegetation success (bond release) sampling which can begin in year seven. You may add more flexability to your sampling interval such as beginning year 3 or 4, with the second sampling in year 5, 6 or 7 and then the third may be year 7 – 13 and may be used for revegetation success.

14. Page RP-29. Section RP.7.2. There is a reference to RP.8 in this section. Please correct the reference if it is not correct.

15. Table RP6.1. Could you please add a footnote listing the disturbances that are included in the 87.3 acres of Disturbance and what the disturbances will be postmining in the 56.1 acres.

16. Exhibit RP.2-1. Postmining the landuse will be Grazingland and Fish and Wildlife Habitat (937.7 acres) and Cropland (3.7 acres) with 56.1 acres of disturbance, 4.9 acres of water and 11.6 acres of wetland. These landuses will match the landuses on Exhiit D1.1-1. With just minor acreage changes shown in Table RP.6-1. Since the railroad and major roads are identified and Taylor Quarry is going to be reclaimed to Grazingland and Fish and Wildlife Habitat, the Industrial commercial stippling is not needed on these areas.

sp\

xc: Cheyenne File

WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4699

wgfd.wyo.gov

GOVERNOR
MATTHEW H. MEAD

DIRECTOR
SCOTT TALBOTT

COMMISSIONERS
RICHARD KLOUDA – President
CHARLES PRICE – Vice President
MARK ANSELMI
PATRICK CRANK
KEITH CULVER
T. CARRIE LITTLE
DAVID RAEL

March 12, 2015

WER 273.01b
Intermountain Resources
Ramaco, LLC.
Wildlife Baseline Data Report
Brook Coal Mine Permit Area
Sheridan County

Bjarne J. Kristiansen
Department of Environmental Quality
Land Quality Division
2100 West 5th Street
Sheridan, WY 82801

Dear Mr. Kristiansen:

The staff of the Wyoming Game and Fish Department has reviewed the Wildlife Baseline Data Report for the Brook Coal Mine Permit Area from Intermountain Resources on behalf of Ramaco, LLC in Sheridan County. We offer the following comments for your consideration.

We have reviewed the baseline wildlife data provided by Intermountain Resources and completed for the Appendix D9. We find the information adequate and collected in a manner consistent with typical coal mine reporting procedures. We recommend this report become part of the annual reporting which will ensue throughout the operation of the mine. We suggest coordinating with the USFWS regarding raptor mitigation as needed through the mining process. We recommend mining reclamation practices consider providing suitable habitat for existing wildlife within the specifications required by DEQ-LQD.

Thank you for the opportunity to comment. If you have any questions or concerns, please contact Scott Gamo, Staff Terrestrial Biologist, at 307-777-4509.

Sincerely,

for John Kennedy
Deputy Director

JK/mf/ns

cc: USFWS
Paul Mavrakis, Sheridan Region
Tim Thomas, Sheridan Region
Lynn Jahnke, Sheridan Region
Jeff Baron, WWC Engineering

From:	Mark Rogaczewski
To:	BJ Kristiansen
Subject:	Fwd: Mtg with counsel for Ramaco
Date:	Thursday, May 14, 2015 6:03:36 AM

FYI - we will call in from my office.

Mark

---------- Forwarded message ----------
From: **andrew kuhlmann** <andrew.kuhlmann@wyo.gov>
Date: Tue, Apr 22, 2014 at 12:24 PM
Subject: Re: Mtg with counsel for Ramaco
To: Nancy Nuttbrock <nancy.nuttbrock@wyo.gov>
Cc: Mark Rogaczewski <mark.rogaczewski@wyo.gov>

Nancy,

Mr. Emrich told me that he's the only one coming on behalf of Ramaco.

Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From: Google Calendar
To: andrew kuhlmann; andrew kuhlmann
Subject: Notification: Call Tom Sansonetti about Ramaco @ Mon Dec 1, 2014 (Andrew Kuhlmann)
Date: Thursday, May 14, 2015 10:36:09 AM

Call Tom Sansonetti about Ramaco

more details »

When Mon Dec 1, 2014

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew

Calendar Andrew Kuhlmann

Who
- andrew kuhlmann - organizer

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for notifications on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From:	Matthew Kunze
To:	Muthu Kuchanur; Deanna Hill
Cc:	Carol Bilbrough
Subject:	Fwd: Ramaco Brook Mine permit application electronic files
Date:	Sunday, May 17, 2015 10:11:23 AM
Attachments:	image001.jpg

Bj was able to place the Ramaco/Brook Mine permit application files on our server. The location of the files is at:

F:\Division\LQD\RAMACO

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

---------- Forwarded message ----------
From: **BJ Kristiansen** <bj.kristiansen@wyo.gov>
Date: Wed, Nov 19, 2014 at 12:08 PM
Subject: RE: Ramaco Brook Mine permit application electronic files
To: Matthew Kunze <matthew.kunze@wyo.gov>

Matt,

I just dropped the files onto your server in Cheyenne. I don't know how your file system is set up but it should be on a common drive we all share and copied under the folder RAMACO. Mine is mapped as Cheyenne (L:).

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, November 19, 2014 11:18 AM
To: BJ Kristiansen
Cc: David Myers; David Schellinger; Deanna Hill; Doug Emme; Jaime Jakes; Kim Medina; Muthu Kuchanur; Stacy Page
Subject: Re: Ramaco Brook Mine permit application electronic files

Bj,

I am unable to access the Sheridan server - I'm assuming this is just a problem for Cheyenne folks. I left a voicemail with Steve Girt to see if we can get access, so I will let you know what I find out. Another option might be Sharepoint under LQD Files.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Wed, Nov 19, 2014 at 10:47 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> To all reviewers of the Ramaco Brook Mine permit application. I have placed the digital application files on the Sheridan server for those of you who prefer electronic interaction. They are at the following location:
>
> Sheridan(F:)\DIVISION\EVERYONE\LQDDATA\RAMACO
>
> The Sheridan server disk may be mapped to a different drive letter on your computer. Use whichever one is mapped to our server.

If there is a problem accessing the files, please contact me and we'll figure something else out.

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Nancy Nuttbrock
To:	Mark Rogaczewski; BJ Kristiansen
Subject:	Fwd: Upcoming meeting w/ Land Quality Division
Date:	Monday, May 18, 2015 2:58:44 AM
Attachments:	Background for 5-6-14 DEQ mtg..pdf image001.gif

FYI, for tomorrow.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

---------- Forwarded message ----------
From: **andrew kuhlmann** <andrew.kuhlmann@wyo.gov>
Date: Sun, May 4, 2014 at 12:23 AM
Subject: Upcoming meeting w/ Land Quality Division
To: Nancy Nuttbrock <nancy.nuttbrock@wyo.gov>

---------- Forwarded message ----------
From: **Andrew Emrich** <ACEmrich@hollandhart.com>
Date: Friday, May 2, 2014
Subject: Upcoming meeting w/ Land Quality Division
To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>

Andrew,

Here is the background paper for next Tuesday's meeting. Will you by chance have a conference number available? I'd like one of Ramaco's permitting folks to call-in, if possible. I'll be the only one at the meeting in person for Ramaco.

Thanks much & have a great weekend.

Andrew

Andrew C. Emrich, P.C.

Holland & Hart LLP

6380 South Fiddlers Green Circle, Suite 500

Greenwood Village, CO 80111

(303) 290-1621 phone

(307) 286-5120 mobile

(866) 711-8046 fax

acemrich@hollandhart.com

CONFIDENTIAL NOTICE: This message is PRIVILEGED AND CONFIDENTIAL. If you believe that this e-mail has been sent to you in error, please reply to notify the sender that you received the message in error, and please delete and disregard this e-mail. Thank you.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

Background for 5/6 Meeting

- Ramaco Coal LLC purchased the coal mineral estate from Sheridan-Wyoming Coal Company, Inc. (SWCC) in 2011. Ramaco's coal estate was severed from the surface estate over fifty years ago through a series of severance deeds in which Ramaco's predecessor-in-interest, SWCC, conveyed the surface to private third parties, reserving the coal. The surface of a large portion of the property now is owned by two corporate landowners. The severance deed for their property reserved the right to use so much of the surface as necessary or convenient to mine coal and specified the per-acre amount of surface damages that are to be paid if the surface is used for mining of coal.

- Ramaco has been actively involved in pre-permitting activities for its proposed surface coal operation and plans to submit its Application for Permit to Mine in the late summer of 2014. As part of its planning efforts, Ramaco has entered into surface use agreements with the balance of the surface owners, who were not subject to the reserved surface use right and specified surface damages, and pursuant to agreement will receive an executed Surface Landowner's Consent (LQD Form 8) from each of these surface owners.

- Ramaco has, to date, been unable to obtain surface use agreements with the two surface owners subject to the reserved surface use right and specified surface damages, and it is possible that one or both of these surface owners may decline to execute the Surface Owner Consent form. It is Ramaco's belief that these surface owners are not "resident or agricultural landowners" under the WY Environmental Quality Act (WY EQA). WY STAT. ANN. (W.S.A.) § 35-11-406 (b) (xi).

- The WY EQA directs applicants for mining permits to attempt to obtain an "instrument of consent" from each affected surface owner, including non-residential/agricultural landowners. W.S.A. § 35-11-406 (b) (xii). Similarly, LQD Guideline No. 6A provides that mining applications should contain surface owner letters of consent on LQD Form 8. LQD Guideline 6A, Pt. 1, "Surface Owner Consent and Right of Entry."

- The WY EQA also entitles a permit applicant to petition the Wyoming Environmental Quality Council (EQC) for an "order in lieu of consent" from non-residential/agricultural surface owners who decline to provide the required letter of consent for a mine permit. W.S.A. § 35-11-406 (b) (xii).

- Neither the WY EQA nor LQD's regulations/guidance provide clear direction on when in the permitting process an applicant should seek an order in lieu of consent from an non-consenting surface owner, or more generally, how the EQC petition process intersects with the LQD permitting process.

- Ramaco is interested in finding a practical solution that allows its permit application to move forward even as it attempts to resolve any outstanding surface owner consents or seeks an order in lieu of consent from the EQC for non-consenting surface owners.

HOLLAND&HART.

THE LAW OUT WEST

From: Google Calendar
To: andrew kuhlmann; andrew kuhlmann
Subject: Reminder: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (andrew.kuhlmann@wyo.gov)
Date: Monday, May 18, 2015 5:06:23 AM

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar andrew.kuhlmann@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock
- Mark Rogaczewski
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you set a reminder for this event on the calendar andrew.kuhlmann@wyo.gov.

You can change your reminders for specific events in the event details page in https://www.google.com/calendar/.

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Brook Mine permit application
Date: Saturday, May 23, 2015 7:22:17 PM

Matt,

We have been in communication with RAMACO pretty continuously for the past year and it does look like the August time frame for the application is still a possibility. There are some problems with surface owner consent which will change the permit boundary significantly, depending on the outcome of land negotiations. A CHIA will be an interesting exercise in modeling as the mine is surrounded by old, abandoned underground mines as well as a series of NE-SW trending faults that chop up the lithology. AND the Tongue River flows through the area. AND this is an underground mine. I was the geologist at the Bighorn Coal mine back in the late 1980's and groundwater was always difficult to deal with as our models fell apart when viewing the groundwater regime at any distance over about a mile. Good times. We'll have fun.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, June 03, 2014 7:46 AM
To: Bj Kristiansen
Subject: Brook Mine permit application

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: bj.kristiansen@wyo.gov; andrew kuhlmann; Nancy Nuttbrock; Mark Rogaczewski
Subject: Invitation: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (bjarne.kristiansen@wyo.gov)
Date: Sunday, May 24, 2015 2:05:54 PM
Attachments: invite.ics

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar bjarne.kristiansen@wyo.gov

Who
- andrew kuhlmann - organizer
- Mark Rogaczewski
- Nancy Nuttbrock
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_80.ics (1364 Bytes) cannot be converted to PDF format.

From: Google Calendar
To: andrew kuhlmann; andrew kuhlmann
Subject: Reminder: Prep Meeting re: Ramaco process @ Tue May 20, 2014 11am - 12pm (andrew.kuhlmann@wyo.gov)
Date: Monday, May 25, 2015 6:09:59 AM

Prep Meeting re: Ramaco process

more details »

Meeting to discuss Ramaco's potential petition to the EQC prior to the May 21st meeting w/ Director Parfitt, Jim Ruby, and Ramaco's legal counsel

When Tue May 20, 2014 11am – 12pm Mountain Time

Where Nancy's Office (map)

Calendar andrew.kuhlmann@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for reminders on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From:	andrew kuhlmann
To:	BJ Kristiansen
Cc:	Nancy Nuttbrock; Carol Bilbrough; Mark Rogaczewski
Subject:	Re: RAMACO permit application imminent
Date:	Monday, May 25, 2015 5:54:09 PM

BJ,

I appreciate the heads-up. I'll be ready to take a look at the deed when it comes in.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

From: Nancy Nuttbrock
To: andrew.kuhlmann@wyo.gov; Nancy Nuttbrock
Subject: Accepted: Prep Meeting re: Ramaco process @ Tue May 20, 2014 11am - 12pm (andrew.kuhlmann@wyo.gov)
Date: Monday, May 25, 2015 10:41:38 PM
Attachments: invite.ics

Nancy Nuttbrock has accepted this invitation.

Prep Meeting re: Ramaco process

Meeting to discuss Ramaco's potential petition to the EQC prior to the May 21st meeting w/ Director Parfitt, Jim Ruby, and Ramaco's legal counsel

When Tue May 20, 2014 11am – 12pm Mountain Time

Where Nancy's Office (map)

Calendar andrew.kuhlmann@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitation replies on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_81.ics (807 Bytes) cannot be converted to PDF format.

From: Google Calendar
To: andrew kuhlmann; andrew kuhlmann
Subject: Notification: Ramaco - Mtg w/ Tom Sansonetti @ Fri Dec 5, 2014 2:30pm - 3:30pm (Andrew Kuhlmann)
Date: Tuesday, May 26, 2015 8:02:32 PM

Ramaco - Mtg w/ Tom Sansonetti

more details »

When Fri Dec 5, 2014 2:30pm – 3:30pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew

Calendar Andrew Kuhlmann

Who
- andrew kuhlmann - organizer

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for notifications on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From:	Mark Rogaczewski
To:	andrew.kuhlmann@wyo.gov; Mark Rogaczewski
Subject:	Accepted: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (andrew.kuhlmann@wyo.gov)
Date:	Wednesday, May 27, 2015 5:15:33 PM
Attachments:	invite.ics

Mark Rogaczewski has accepted this invitation.

Mtg w/ Andrew Emrich about Ramaco Coal

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar andrew.kuhlmann@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock
- Mark Rogaczewski

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitation replies on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_82.ics (649 Bytes) cannot be converted to PDF format.

From: Matthew Kunze
To: Jennifer Mickle
Cc: Deanna Hill
Subject: Re: looking for TFN 6 2/025 - RAMACO
Date: Thursday, May 28, 2015 4:38:38 PM

Ok, thanks!

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Mon, Aug 19, 2013 at 10:30 AM, Jennifer Mickle <jennifer.mickle@wyo.gov> wrote:

> I have this file but have not received the package as of today. I have not gotten the mail this morning from Kim. So not sure if it will be in this morning or this afternoon. Will let you know when it comes in,
>
> Thanks Jen

On Mon, Aug 19, 2013 at 10:25 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Hi,
>
> I was wondering if anyone has a file out for this? It is a fairly new D3 TFN.
>
> Thanks, Matt
>
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
>
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.
>

--
Jennifer Bjerke-Mickle
Records Analyst
State of Wyoming
DEQ-Land Quality Division
Herschler Bldg., 3rd Flr. West
122 West 25th St.
Cheyenne, WY 82002
jennifer.mickle@wyo.gov
Phone: 307-777-6532
Fax: 307-777-5864

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Todd Parfitt
To: jim.ruby@wyo.gov; Todd Parfitt
Subject: Accepted: Meeting on Ramaco process @ Wed May 21, 2014 3pm - 4pm (jim.ruby@wyo.gov)
Date: Sunday, May 31, 2015 6:13:08 AM
Attachments: invite.ics

Todd Parfitt has accepted this invitation.

Meeting on Ramaco process

When Wed May 21, 2014 3pm – 4pm Mountain Time

Where Office of Todd Parfitt (map)

Calendar jim.ruby@wyo.gov

Who
- Jim Ruby - organizer
- Todd Parfitt
- Nancy Nuttbrock
- andrew kuhlmann

Invitation from Google Calendar

You are receiving this email at the account jim.ruby@wyo.gov because you are subscribed for invitation replies on calendar jim.ruby@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_83.ics (636 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: BJ Kristiansen
Subject: Fwd: Mtg with counsel for Ramaco
Date: Wednesday, June 03, 2015 4:54:22 PM

Information on meeting set for May 6 to discuss landowner consent requirements and how to permit lands if a landowner will not provide consent.

Mark

---------- Forwarded message ----------
From: **Nancy Nuttbrock** <nancy.nuttbrock@wyo.gov>
Date: Tue, Apr 22, 2014 at 10:14 AM
Subject: Re: Mtg with counsel for Ramaco
To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>
Cc: Mark Rogaczewski <mark.rogaczewski@wyo.gov>

My office is fine (assuming H&H will bring 1 or 2 people). Thanks for this information, Andrew.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

On Tue, Apr 22, 2014 at 10:10 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Nancy and Mark,
>
> I spoke to Andrew Emrich from Holland and Hart and set up a May 6th meeting.
>
> Andrew informed me that his client is Ramaco, and they are looking at starting a mine (at a previous mine site) north of Sheridan. I found the following PDF through Google: http://www.ramacollc.com/upload/Ramaco%20Sheridan%20Profile%20February%202013.pdf
>
> They also have a link about the site on their website: http://www.ramacollc.com/Development-Projects.html
>
> Andrew said they are hoping to be submitting their application to LQD in the late summer. He wants to meet with us to discuss how to proceed if they encounter recalcitrant surface landowners. He said they don't know for sure that they will have problems getting consents, but I suspect they wouldn't ask us if they didn't already have some names in mind.
>
> Nancy, would you like to meet in your office, or should I get one of the smaller conference rooms scheduled?
>
> Thanks,
> Andrew
> --
> Andrew J. Kuhlmann
> Assistant Attorney General
> Water & Natural Resources Division
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From:	BJ Kristiansen
To:	Nancy Nuttbrock
Subject:	RE: Upcoming meeting w/ Land Quality Division
Date:	Thursday, June 04, 2015 6:17:56 PM
Attachments:	image001.gif

Thanks for the update Nancy.

-bj

From: Nancy Nuttbrock [mailto:nancy.nuttbrock@wyo.gov]
Sent: Monday, May 05, 2014 10:08 AM
To: andrew kuhlmann; ACEmrich@hollandhart.com; Mark Rogaczewski; BJ Kristiansen
Subject: Re: Upcoming meeting w/ Land Quality Division

Good morning,

As long as we are only planning to call one person at Ramaco, and Mark and BJ in LQD's Sheridan office, I can make a 3-way call from my office, without using a conference line.

Looking forward to the discussion tomorrow morning at 11am.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

On Sun, May 4, 2014 at 12:23 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> ---------- Forwarded message ----------
> From: **Andrew Emrich** <ACEmrich@hollandhart.com>
> Date: Friday, May 2, 2014
> Subject: Upcoming meeting w/ Land Quality Division
> To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>
>
> Andrew,
>
> Here is the background paper for next Tuesday's meeting. Will you by chance have a conference number available? I'd like one of Ramaco's permitting folks to call-in, if possible. I'll be the only one at the meeting in person for Ramaco.

Thanks much & have a great weekend.

Andrew

Andrew C. Emrich, P.C.
Holland & Hart LLP
6380 South Fiddlers Green Circle, Suite 500
Greenwood Village, CO 80111
(303) 290-1621 phone
(307) 286-5120 mobile
(866) 711-8046 fax
acemrich@hollandhart.com

CONFIDENTIAL NOTICE: This message is PRIVILEGED AND CONFIDENTIAL. If you believe that this e-mail has been sent to you in error, please reply to notify the sender that you received the message in error, and please delete and disregard this e-mail. Thank you.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--

Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

HOLLAND&HART.

THE LAW OUT WEST

From: BJ Kristiansen
To: andrew.kuhlmann@wyo.gov; BJ Kristiansen
Subject: Accepted: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (andrew.kuhlmann@wyo.gov)
Date: Saturday, June 06, 2015 5:03:37 PM
Attachments: invite.ics

BJ Kristiansen has accepted this invitation.

Mtg w/ Andrew Emrich about Ramaco Coal

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar andrew.kuhlmann@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock
- Mark Rogaczewski
- BJ Kristiansen

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitation replies on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_84.ics (645 Bytes) cannot be converted to PDF format.

From: Jim Ruby
To: todd.parfitt@wyo.gov; andrew kuhlmann; Nancy Nuttbrock; Jim Ruby
Subject: Updated Invitation: Meeting on Ramaco process @ Wed May 21, 2014 3pm - 4pm (todd.parfitt@wyo.gov)
Date: Saturday, June 06, 2015 6:40:00 PM
Attachments: invite.ics

This event has been changed.

Meeting on Ramaco process

more details »

When **Changed:** Wed May 21, 2014 3pm – 4pm Mountain Time

Where Office of Todd Parfitt (map)

Calendar todd.parfitt@wyo.gov

Who
- Jim Ruby - organizer
- Todd Parfitt
- andrew kuhlmann
- Nancy Nuttbrock

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account todd.parfitt@wyo.gov because you are subscribed for updated invitations on calendar todd.parfitt@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_85.ics (1335 Bytes) cannot be converted to PDF format.

From:	Matthew Kunze
To:	Bj Kristiansen
Cc:	Muthu Kuchanur
Subject:	Brook Mine review/CHIA
Date:	Sunday, June 07, 2015 11:03:39 AM

Hi BJ,

Thanks for your memo on the request for review on the Brook Mine application. I saw that the volumes have arrived here and have been stamped in. We are happy to assist in the review.

Due to our work on another CHIA, we likely won't be starting work on the Brook Mine CHIA until sometime early next year. However, I wanted to mention that there will be some items we would like to request from the applicant in advance that will help us write the CHIA. This might include things like baseline monitoring data in electronic format (CARF) and certain CAD files to assist us with maps.

I will take a look at the application soon to make a list of these items. Depending on your thoughts, I was thinking we could add these requests as comments for the review, but possibly send them early so we would not have to wait until the first round responses were received?

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

From: Google Calendar
To: Todd Parfitt; Jim Ruby
Subject: Reminder: Meeting on Ramaco process @ Wed May 21, 2014 3pm - 4pm (todd.parfitt@wyo.gov)
Date: Tuesday, June 09, 2015 5:51:46 AM

Meeting on Ramaco process

more details »

When Wed May 21, 2014 3pm – 4pm Mountain Time

Where Office of Todd Parfitt (map)

Calendar todd.parfitt@wyo.gov

Who
- Jim Ruby - organizer
- Nancy Nuttbrock
- Todd Parfitt
- andrew kuhlmann

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account todd.parfitt@wyo.gov because you are subscribed for reminders on calendar todd.parfitt@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From: andrew kuhlmann
To: nancy.nuttbrock@wyo.gov; andrew kuhlmann
Subject: Invitation: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (nancy.nuttbrock@wyo.gov)
Date: Wednesday, June 10, 2015 8:21:47 PM
Attachments: invite.ics

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar nancy.nuttbrock@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account nancy.nuttbrock@wyo.gov because you are subscribed for invitations on calendar nancy.nuttbrock@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_86.ics (1075 Bytes) cannot be converted to PDF format.

From: Matthew Kunze
To: Bj Kristiansen
Subject: Brook Mine permit application
Date: Thursday, June 11, 2015 7:31:33 AM

Hi BJ,

I read the story in the Casper paper about Ramaco's Brook Mine application, and the story mentioned the application may be submitted in August. Just wanted to see if that is your understanding; I am curious since we will need to schedule working on the CHIA for it later in the year.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

From: Mark Rogaczewski
To: bj.kristiansen@wyo.gov; andrew kuhlmann; Nancy Nuttbrock; Mark Rogaczewski
Subject: Invitation: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (bjarne.kristiansen@wyo.gov)
Date: Thursday, June 11, 2015 3:46:40 PM
Attachments: invite.ics

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar bjarne.kristiansen@wyo.gov

Who
- andrew kuhlmann - organizer
- Mark Rogaczewski
- Nancy Nuttbrock
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_87.ics (1364 Bytes) cannot be converted to PDF format.

From: Matthew Kunze
To: Kim Pandullo
Subject: CHIA folder info
Date: Saturday, June 13, 2015 5:11:25 AM

Brook Mine (proposed new mine)
TFN 6 2/025
CHIA 39

Thanks!

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

From: Google Calendar
To: andrew kuhlmann; Jim Ruby
Subject: Reminder: Meeting on Ramaco process @ Wed May 21, 2014 3pm - 4pm (andrew.kuhlmann@wyo.gov)
Date: Sunday, June 14, 2015 12:27:57 AM

Meeting on Ramaco process

more details »

When Wed May 21, 2014 3pm – 4pm Mountain Time

Where Office of Todd Parfitt (map)

Calendar andrew.kuhlmann@wyo.gov

Who
- Jim Ruby - organizer
- Todd Parfitt
- Nancy Nuttbrock
- andrew kuhlmann

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for reminders on calendar andrew.kuhlmann@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

From: andrew kuhlmann
To: jim.ruby@wyo.gov; andrew kuhlmann
Subject: Accepted: Meeting on Ramaco process @ Wed May 21, 2014 3pm - 4pm (jim.ruby@wyo.gov)
Date: Monday, June 15, 2015 12:01:46 AM
Attachments: invite.ics

---

andrew kuhlmann has accepted this invitation.

Meeting on Ramaco process

When Wed May 21, 2014 3pm – 4pm Mountain Time

Where Office of Todd Parfitt (map)

Calendar jim.ruby@wyo.gov

Who
- Jim Ruby - organizer
- Todd Parfitt
- Nancy Nuttbrock
- andrew kuhlmann

Invitation from Google Calendar

You are receiving this email at the account jim.ruby@wyo.gov because you are subscribed for invitation replies on calendar jim.ruby@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_88.ics (642 Bytes) cannot be converted to PDF format.

From:	Matthew Kunze
To:	BJ Kristiansen
Subject:	Re: Ramaco Brook Mine permit application electronic files
Date:	Monday, June 15, 2015 11:51:40 PM
Attachments:	image001.jpg

Thanks Bj - I found the files on our server. I will let Muthu and Deanna know the location.

I notice that the maps/Exhibits are in PDF, so as I mentioned yesterday, we will probably request some of these in CAD format so we can export the data to GIS to create our own maps for the CHIA.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Nov 19, 2014 at 12:08 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I just dropped the files onto your server in Cheyenne. I don't know how your file system is set up but it should be on a common drive we all share and copied under the folder RAMACO. Mine is mapped as Cheyenne (L:).
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Wednesday, November 19, 2014 11:18 AM
> **To:** BJ Kristiansen
> **Cc:** David Myers; David Schellinger; Deanna Hill; Doug Emme; Jaime Jakes; Kim Medina; Muthu Kuchanur; Stacy Page
> **Subject:** Re: Ramaco Brook Mine permit application electronic files
>
> Bj,
>
> I am unable to access the Sheridan server - I'm assuming this is just a problem for

Cheyenne folks. I left a voicemail with Steve Girt to see if we can get access, so I will let you know what I find out. Another option might be Sharepoint under LQD Files.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

On Wed, Nov 19, 2014 at 10:47 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> To all reviewers of the Ramaco Brook Mine permit application. I have placed the digital application files on the Sheridan server for those of you who prefer electronic interaction. They are at the following location:
>
> Sheridan(F:)\DIVISION\EVERYONE\LQDDATA\RAMACO
>
> The Sheridan server disk may be mapped to a different drive letter on your computer. Use whichever one is mapped to our server.
>
> If there is a problem accessing the files, please contact me and we'll figure something else out.

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Nancy Nuttbrock
To:	andrew kuhlmann; ACEmrich@hollandhart.com; Mark Rogaczewski; BJ Kristiansen
Subject:	Re: Upcoming meeting w/ Land Quality Division
Date:	Thursday, June 18, 2015 12:50:39 PM
Attachments:	image001.gif

Good morning,

As long as we are only planning to call one person at Ramaco, and Mark and BJ in LQD's Sheridan office, I can make a 3-way call from my office, without using a conference line.

Looking forward to the discussion tomorrow morning at 11am.

Nancy Nuttbrock
Deputy Director, Wyoming Department of Environmental Quality
Administrator, Land Quality Division

Office: 307-777-7046
Cell: 307-421-7100

On Sun, May 4, 2014 at 12:23 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> ---------- Forwarded message ----------
> From: **Andrew Emrich** <ACEmrich@hollandhart.com>
> Date: Friday, May 2, 2014
> Subject: Upcoming meeting w/ Land Quality Division
> To: andrew kuhlmann <andrew.kuhlmann@wyo.gov>
>
> Andrew,
>
> Here is the background paper for next Tuesday's meeting. Will you by chance have a conference number available? I'd like one of Ramaco's permitting folks to call-in, if possible. I'll be the only one at the meeting in person for Ramaco.
>
> Thanks much & have a great weekend.
>
> Andrew

Andrew C. Emrich, P.C.

Holland & Hart LLP

6380 South Fiddlers Green Circle, Suite 500

Greenwood Village, CO 80111

(303) 290-1621 phone

(307) 286-5120 mobile

(866) 711-8046 fax

acemrich@hollandhart.com

CONFIDENTIAL NOTICE: This message is PRIVILEGED AND CONFIDENTIAL. If you believe that this e-mail has been sent to you in error, please reply to notify the sender that you received the message in error, and please delete and disregard this e-mail. Thank you.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Andrew J. Kuhlmann
Assistant Attorney General
Water & Natural Resources Division
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or

copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

HOLLAND&HART.

THE LAW OUT WEST

From: andrew kuhlmann
To: nancy.nuttbrock@wyo.gov; andrew kuhlmann
Subject: Invitation: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (nancy.nuttbrock@wyo.gov)
Date: Friday, June 19, 2015 11:53:39 AM
Attachments: invite.ics

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar nancy.nuttbrock@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account nancy.nuttbrock@wyo.gov because you are subscribed for invitations on calendar nancy.nuttbrock@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_89.ics (1075 Bytes) cannot be converted to PDF format.

From: andrew kuhlmann
To: mark.rogaczewski@wyo.gov; Nancy Nuttbrock; andrew kuhlmann
Subject: Invitation: Mtg w/ Andrew Emrich about Ramaco Coal @ Tue May 6, 2014 11am - 12pm (mark.rogaczewski@wyo.gov)
Date: Saturday, June 20, 2015 11:43:45 AM
Attachments: invite.ics

Mtg w/ Andrew Emrich about Ramaco Coal

more details »

When Tue May 6, 2014 11am – 12pm Mountain Time

Calendar mark.rogaczewski@wyo.gov

Who
- andrew kuhlmann - organizer
- Nancy Nuttbrock
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these notifications, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Attachment invite_90.ics (1223 Bytes) cannot be converted to PDF format.

From:	Shannon Anderson
To:	Fleischman, Jeffrey; Alan Edwards; sanderson@powderriverbasin.org
Cc:	Kyle Wendtland; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham
Subject:	RE: Meeting with New LQD Administrator on Powder River Coal Concerns
Date:	Wednesday, June 24, 2015 7:53:46 AM

Dear Kyle & Alan (and others):

Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).

Our proposed agenda is

1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion
2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?
3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies
4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?
5. (if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?

We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.

Thanks, and I look forward to seeing you on July 8th.
Shannon

From: Fleischman, Jeffrey [mailto:jfleischman@osmre.gov]
Sent: Wednesday, June 17, 2015 7:37 AM
To: Alan Edwards
Cc: Shannon Anderson; Kyle Wendtland; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Robert LeResche; Gillian Malone; LJ Turner
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

OK. If I cannot attend, I may send Frank Bartlett and Neal Ruebush down the night before so they can attend. My schedule is tight that week, but I will try to make it.

Jeff

On Wed, Jun 17, 2015 at 7:34 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
Good morning Shannon. From our end only Kyle and I will be able to attend the meeting

but we are looking forward to the discussions. Unfortunately Jeff, we need to meet at 8:00 am as Kyle's schedule is very tight that day.

Shannon, it would be appreciated if the agenda of topics you would like to discuss could be pulled together and forwarded a few days in advance of the meeting. This will give us an opportunity to prepare for the meeting.

Thank you.

Alan

Sent from my iPad

On Jun 15, 2015, at 10:25 AM, Fleischman, Jeffrey <jfleischman@osmre.gov> wrote:

> If we move the meeting time to 9 am, I can attend. David Berry cannot attend the meeting, but I would like to meet with everyone.
>
> Please let me know if that is acceptable.
>
> Thanks
> Jeff
>
> On Mon, Jun 15, 2015 at 8:48 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
>
> Hi Kyle, let's plan on 8 am on July 8th. Thanks for taking the time to meet with us. Given the early start (and the necessity of an overnight) I'm not sure who from our board will be able to make it, but for sure Jill and I can be there, and perhaps we can follow-up in northern Wyoming sometime soon with more of our members. Will send you attendees and a proposed agenda closer to the date.
>
> Thanks very much,
> Shannon
>
> **From:** Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
> **Sent:** Friday, June 12, 2015 4:11 PM
> **To:** Jill Morrison; Carol Bilbrough; Alan Edwards; Kimber Wichmann; Jeffrey W. Fleischman; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Robert LeResche; Gillian Malone; LJ Turner; Shannon Anderson
> **Subject:** Re: Meeting with New LQD Administrator on Powder River Coal Concerns
>
> Dear Shannon:
>
> The proposed date of July 8, 2015 at 8:00 am will work in my schedule. I hope this will accommodate your travel and avoid the need to make an additional trip to Cheyenne. I will arrange for a meeting room here at the Herschler building. It would be helpful if you could provide a list of attendees and specific agenda items you have interest in reviewing in advance of the meeting.
>
> Sincerely, Kyle

On Mon, Jun 8, 2015 at 2:38 PM, <jmorrison@powderriverbasin.org> wrote:
Kyle, looking forward to meeting with you. Shannon will propose a date. Congratulations and good luck with the move. Best, Jill Morrison

On 2015-06-07 17:17, Kyle Wendtland wrote:

> Dear Shannon:
>
> I agree, and would like to schedule this meeting with the Powder River Basin Resource Council and review the report provided. I have meetings scheduled the week of June 15th, and will be traveling and moving to Cheyenne the week of June 22nd. If possible it would be best in my schedule if we could work toward a potential date the week of July 6th. Please let me know if there are dates during that week that would work with your schedule.
>
> Sincerely, Kyle
>
> On Wed, Jun 3, 2015 at 4:31 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
>
>> Dear Kyle, DEQ staff, and Jerimiah,
>>
>> We would like to set up a meeting with you to get to know Kyle and to touch base with the DEQ staff about some of our current concerns.
>>
>> The Western Organization of Resource Councils, of which we are a member group, is about to publicly release the attached report, and we would like to sit down with you to discuss its findings, specifically on reclamation and self-bonding. We'd also like to learn more about the self-bonding program in general.
>>
>> We are available for a meeting June 16, 17, 18, or 24 if any of those days work for you. We could come to Cheyenne as we know that would be most convenient for your staff.
>>
>> Please let us know if there is a date and time that works for a meeting.
>>
>> Thank you,
>>
>> Shannon
>>
>> Shannon Anderson
>>
>> Powder River Basin Resource Council
>>
>> 934 N. Main St., Sheridan, WY 82801

> 307-672-5809 [1] cell: 307-763-0995 [2]
>
> sanderson@powderriverbasin.org
>
> Join us at www.powderriverbasin.org [3]
>
> Follow us at https://twitter.com/PRBResCouncil [4]

--

Kyle J. Wendtland

Administrator

Department of Environmental Quality

Land Quality Division

122 W. 25th Street

Herschler Building, 3W

Cheyenne, Wyoming 82002

307-777-7046

Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Links:
---
[1] tel:307-672-5809
[2] tel:307-763-0995
[3] http://www.powderriverbasin.org/
[4] https://twitter.com/PRBResCouncil

--
Kyle J. Wendtland

Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Jeffrey W. Fleischman
Chief, Denver Field Division
150 East B St. RM 1018
Casper, WY 82601
Office 307-261-6550
Cell 307-258-0334
Fax 307-261-6552

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Jeffrey W. Fleischman
Chief, Denver Field Division
150 East B St. RM 1018
Casper, WY 82601
Office 307-261-6550
Cell 307-258-0334
Fax 307-261-6552

From:	Kyle Wendtland
To:	<sanderson@powderriverbasin.org>
Cc:	Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham
Subject:	Re: Meeting with New LQD Administrator on Powder River Coal Concerns
Date:	Wednesday, June 24, 2015 11:34:49 AM

Good morning Shannon

Thank you for the updated information I will review in detail early next week

Kyle

Sent from my iPhone

On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle & Alan (and others):
>
> Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).
>
> Our proposed agenda is
>
> <!--[if !supportLists]-->1. <!--[endif]-->Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion
> <!--[if !supportLists]-->2. <!--[endif]-->Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?
> <!--[if !supportLists]-->3. <!--[endif]-->Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies
> <!--[if !supportLists]-->4. <!--[endif]-->(if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?
> <!--[if !supportLists]-->5. <!--[endif]-->(if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?
>
> We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.
>
> Thanks, and I look forward to seeing you on July 8th.

Shannon

From: Fleischman, Jeffrey [mailto:jfleischman@osmre.gov]
Sent: Wednesday, June 17, 2015 7:37 AM
To: Alan Edwards
Cc: Shannon Anderson; Kyle Wendtland; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Robert LeResche; Gillian Malone; LJ Turner
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

OK. If I cannot attend, I may send Frank Bartlett and Neal Ruebush down the night before so they can attend. My schedule is tight that week, but I will try to make it.

Jeff

On Wed, Jun 17, 2015 at 7:34 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
Good morning Shannon. From our end only Kyle and I will be able to attend the meeting but we are looking forward to the discussions. Unfortunately Jeff, we need to meet at 8:00 am as Kyle's schedule is very tight that day.

Shannon, it would be appreciated if the agenda of topics you would like to discuss could be pulled together and forwarded a few days in advance of the meeting. This will give us an opportunity to prepare for the meeting.

Thank you.

Alan

Sent from my iPad

On Jun 15, 2015, at 10:25 AM, Fleischman, Jeffrey <jfleischman@osmre.gov> wrote:

> If we move the meeting time to 9 am, I can attend. David Berry cannot attend the meeting, but I would like to meet with everyone.
>
> Please let me know if that is acceptable.
>
> Thanks
> Jeff
>
> On Mon, Jun 15, 2015 at 8:48 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
> Hi Kyle, let's plan on 8 am on July 8th. Thanks for taking the time to meet with us. Given the early start (and the necessity of an overnight) I'm not sure who from our board will be able to make it, but for sure Jill and I can be there, and perhaps we can follow-up in northern Wyoming sometime soon with more of our members. Will send you attendees and a proposed agenda closer to the

date.

Thanks very much,
Shannon

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Friday, June 12, 2015 4:11 PM
To: Jill Morrison; Carol Bilbrough; Alan Edwards; Kimber Wichmann; Jeffrey W. Fleischman; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Robert LeResche; Gillian Malone; LJ Turner; Shannon Anderson
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

The proposed date of July 8, 2015 at 8:00 am will work in my schedule. I hope this will accommodate your travel and avoid the need to make an additional trip to Cheyenne. I will arrange for a meeting room here at the Herschler building. It would be helpful if you could provide a list of attendees and specific agenda items you have interest in reviewing in advance of the meeting.

Sincerely, Kyle

On Mon, Jun 8, 2015 at 2:38 PM,
<jmorrison@powderriverbasin.org> wrote:
Kyle, looking forward to meeting with you. Shannon will propose a date. Congratulations and good luck with the move. Best, Jill Morrison

On 2015-06-07 17:17, Kyle Wendtland wrote:

> Dear Shannon:
>
> I agree, and would like to schedule this meeting with the Powder River
> Basin Resource Council and review the report provided. I have meetings
> scheduled the week of June 15th, and will be traveling and moving to
> Cheyenne the week of June 22nd. If possible it would be best in my
> schedule if we could work toward a potential date the week of July
> 6th. Please let me know if there are dates during that week that would
> work with your schedule.
>
> Sincerely, Kyle

On Wed, Jun 3, 2015 at 4:31 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle, DEQ staff, and Jerimiah,
>
> We would like to set up a meeting with you to get to know Kyle and
> to touch base with the DEQ staff about some of our current concerns.
>
> The Western Organization of Resource Councils, of which we are a
> member group, is about to publicly release the attached report, and
> we would like to sit down with you to discuss its findings, specifically on reclamation and self-bonding. We'd also like to learn more about the self-bonding program in general.
>
> We are available for a meeting June 16, 17, 18, or 24 if any of those days work for you. We could come to Cheyenne as we know that
> would be most convenient for your staff.
>
> Please let us know if there is a date and time that works for a meeting.
>
> Thank you,
>
> Shannon
>
> Shannon Anderson
>
> Powder River Basin Resource Council
>
> 934 N. Main St., Sheridan, WY 82801
>
> 307-672-5809 [1] cell: 307-763-0995 [2]
>
> sanderson@powderriverbasin.org
>
> Join us at www.powderriverbasin.org [3]
>
> Follow us at https://twitter.com/PRBResCouncil [4]

--

Kyle J. Wendtland

Administrator

Department of Environmental Quality

Land Quality Division

122 W. 25th Street

Herschler Building, 3W

Cheyenne, Wyoming 82002

307-777-7046

Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Links:
---
[1] tel:307-672-5809
[2] tel:307-763-0995
[3] http://www.powderriverbasin.org/
[4] https://twitter.com/PRBResCouncil

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--

Jeffrey W. Fleischman
Chief, Denver Field Division
150 East B St. RM 1018
Casper, WY 82601
Office 307-261-6550
Cell 307-258-0334
Fax 307-261-6552

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--

Jeffrey W. Fleischman
Chief, Denver Field Division
150 East B St. RM 1018
Casper, WY 82601
Office 307-261-6550
Cell 307-258-0334
Fax 307-261-6552

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Shannon Anderson
To:	Kyle Wendtland; sanderson@powderriverbasin.org
Cc:	Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Marilyn Ham
Subject:	RE: Meeting with New LQD Administrator on Powder River Coal Concerns
Date:	Monday, July 06, 2015 9:54:15 AM

Hi Kyle, I just wanted to check in and confirm that the agenda looks ok to you for our meeting on Wednesday morning. Also wanted to confirm that we should come to the Herschler Building 3rd floor West or has LQD moved yet? Thanks, Shannon

---

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Wednesday, June 24, 2015 11:35 AM
To: <sanderson@powderriverbasin.org>
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Good morning Shannon

Thank you for the updated information I will review in detail early next week

Kyle

Sent from my iPhone

On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle & Alan (and others):
>
> Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).
>
> Our proposed agenda is
>
> 1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion
> 2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?
> 3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies
> 4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?
> 5. (if time) – update on Ramaco mine permit application – has Ramaco

responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?

We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.

Thanks, and I look forward to seeing you on July 8th.
Shannon

From: Fleischman, Jeffrey [mailto:jfleischman@osmre.gov]
Sent: Wednesday, June 17, 2015 7:37 AM
To: Alan Edwards
Cc: Shannon Anderson; Kyle Wendtland; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Robert LeResche; Gillian Malone; LJ Turner
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

OK. If I cannot attend, I may send Frank Bartlett and Neal Ruebush down the night before so they can attend. My schedule is tight that week, but I will try to make it.

Jeff

On Wed, Jun 17, 2015 at 7:34 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
Good morning Shannon. From our end only Kyle and I will be able to attend the meeting but we are looking forward to the discussions. Unfortunately Jeff, we need to meet at 8:00 am as Kyle's schedule is very tight that day.

Shannon, it would be appreciated if the agenda of topics you would like to discuss could be pulled together and forwarded a few days in advance of the meeting. This will give us an opportunity to prepare for the meeting.

Thank you.

Alan

Sent from my iPad

On Jun 15, 2015, at 10:25 AM, Fleischman, Jeffrey <jfleischman@osmre.gov> wrote:

> If we move the meeting time to 9 am, I can attend. David Berry cannot attend the meeting, but I would like to meet with everyone.
>
> Please let me know if that is acceptable.
>
> Thanks
> Jeff
>
> On Mon, Jun 15, 2015 at 8:48 AM, Shannon Anderson

<sanderson@powderriverbasin.org> wrote:

Hi Kyle, let's plan on 8 am on July 8th. Thanks for taking the time to meet with us. Given the early start (and the necessity of an overnight) I'm not sure who from our board will be able to make it, but for sure Jill and I can be there, and perhaps we can follow-up in northern Wyoming sometime soon with more of our members. Will send you attendees and a proposed agenda closer to the date.

Thanks very much,
Shannon

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Friday, June 12, 2015 4:11 PM
To: Jill Morrison; Carol Bilbrough; Alan Edwards; Kimber Wichmann; Jeffrey W. Fleischman; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Robert LeResche; Gillian Malone; LJ Turner; Shannon Anderson
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

The proposed date of July 8, 2015 at 8:00 am will work in my schedule. I hope this will accommodate your travel and avoid the need to make an additional trip to Cheyenne. I will arrange for a meeting room here at the Herschler building. It would be helpful if you could provide a list of attendees and specific agenda items you have interest in reviewing in advance of the meeting.

Sincerely, Kyle

On Mon, Jun 8, 2015 at 2:38 PM,
<jmorrison@powderriverbasin.org> wrote:
Kyle, looking forward to meeting with you. Shannon will propose a date. Congratulations and good luck with the move. Best, Jill Morrison

On 2015-06-07 17:17, Kyle Wendtland wrote:

> Dear Shannon:
>
> I agree, and would like to schedule this meeting with the Powder River
> Basin Resource Council and review the report provided. I have meetings
> scheduled the week of June 15th, and will be traveling and moving to
> Cheyenne the week of June 22nd. If possible it would be best in my

schedule if we could work toward a potential date the week of July 6th. Please let me know if there are dates during that week that would
work with your schedule.

Sincerely, Kyle

On Wed, Jun 3, 2015 at 4:31 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle, DEQ staff, and Jerimiah,
>
> We would like to set up a meeting with you to get to know Kyle and
> to touch base with the DEQ staff about some of our current concerns.
>
> The Western Organization of Resource Councils, of which we are a
> member group, is about to publicly release the attached report, and
> we would like to sit down with you to discuss its findings, specifically on reclamation and self-bonding. We'd also like to learn more about the self-bonding program in general.
>
> We are available for a meeting June 16, 17, 18, or 24 if any of those days work for you. We could come to Cheyenne as we know that
> would be most convenient for your staff.
>
> Please let us know if there is a date and time that works for a meeting.
>
> Thank you,
>
> Shannon
>
> Shannon Anderson
>
> Powder River Basin Resource Council
>
> 934 N. Main St., Sheridan, WY 82801
>
> 307-672-5809 [1] cell: 307-763-0995 [2]
>
> sanderson@powderriverbasin.org
>
> Join us at www.powderriverbasin.org [3]
>
> Follow us at https://twitter.com/PRBResCouncil [4]

--

Kyle J. Wendtland

Administrator

Department of Environmental Quality

Land Quality Division

122 W. 25th Street

Herschler Building, 3W

Cheyenne, Wyoming 82002

307-777-7046

Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Links:
---
[1] tel:307-672-5809
[2] tel:307-763-0995
[3] http://www.powderriverbasin.org/
[4] https://twitter.com/PRBResCouncil

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Jeffrey W. Fleischman
Chief, Denver Field Division
150 East B St. RM 1018
Casper, WY 82601
Office 307-261-6550
Cell 307-258-0334
Fax 307-261-6552

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Jeffrey W. Fleischman
Chief, Denver Field Division
150 East B St. RM 1018
Casper, WY 82601
Office 307-261-6550
Cell 307-258-0334
Fax 307-261-6552

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Kyle Wendtland
To:	Shannon Anderson
Cc:	Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Marilyn Ham
Subject:	Re: Meeting with New LQD Administrator on Powder River Coal Concerns
Date:	Monday, July 06, 2015 10:22:36 AM

Dear Shannon:

Yes, we are scheduled to meet with you July 8, 2015 at 8:00 am. We will be meeting in the Bighorn conference room at the Herschler Building 4th floor west.

Thank you, Kyle

On Mon, Jul 6, 2015 at 9:54 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Hi Kyle, I just wanted to check in and confirm that the agenda looks ok to you for our meeting on Wednesday morning. Also wanted to confirm that we should come to the Herschler Building 3rd floor West or has LQD moved yet? Thanks, Shannon
>
> ---
>
> **From:** Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
> **Sent:** Wednesday, June 24, 2015 11:35 AM
> **To:** <sanderson@powderriverbasin.org>
> **Cc:** Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham
>
> **Subject:** Re: Meeting with New LQD Administrator on Powder River Coal Concerns
>
> Good morning Shannon
>
> Thank you for the updated information I will review in detail early next week
>
> Kyle
>
> Sent from my iPhone
>
> On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
>
> > Dear Kyle & Alan (and others):

Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).

Our proposed agenda is

1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion

2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?

3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies

4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?

5. (if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?

We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.

Thanks, and I look forward to seeing you on July 8th.

Shannon

From: Fleischman, Jeffrey [mailto:jfleischman@osmre.gov]
Sent: Wednesday, June 17, 2015 7:37 AM
To: Alan Edwards
Cc: Shannon Anderson; Kyle Wendtland; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Robert LeResche; Gillian Malone; LJ Turner

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

OK. If I cannot attend, I may send Frank Bartlett and Neal Ruebush down the night before so they can attend. My schedule is tight that week, but I will try to make it.

Jeff

On Wed, Jun 17, 2015 at 7:34 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

Good morning Shannon. From our end only Kyle and I will be able to attend the meeting but we are looking forward to the discussions. Unfortunately Jeff, we need to meet at 8:00 am as Kyle's schedule is very tight that day.

Shannon, it would be appreciated if the agenda of topics you would like to discuss could be pulled together and forwarded a few days in advance of the meeting. This will give us an opportunity to prepare for the meeting.

Thank you.

Alan

Sent from my iPad

On Jun 15, 2015, at 10:25 AM, Fleischman, Jeffrey <jfleischman@osmre.gov> wrote:

> If we move the meeting time to 9 am, I can attend. David Berry cannot attend the meeting, but I would like to meet with everyone.
>
> Please let me know if that is acceptable.
>
> Thanks

Jeff

On Mon, Jun 15, 2015 at 8:48 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Hi Kyle, let's plan on 8 am on July 8th. Thanks for taking the time to meet with us. Given the early start (and the necessity of an overnight) I'm not sure who from our board will be able to make it, but for sure Jill and I can be there, and perhaps we can follow-up in northern Wyoming sometime soon with more of our members. Will send you attendees and a proposed agenda closer to the date.

Thanks very much,

Shannon

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Friday, June 12, 2015 4:11 PM
To: Jill Morrison; Carol Bilbrough; Alan Edwards; Kimber Wichmann; Jeffrey W. Fleischman; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Robert LeResche; Gillian Malone; LJ Turner; Shannon Anderson
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

The proposed date of July 8, 2015 at 8:00 am will work in my schedule. I hope this will accommodate your travel and avoid the need to make an additional trip to Cheyenne. I will arrange for a meeting room here at the Herschler building. It would be helpful if you could provide a list of attendees and specific agenda items you have interest in reviewing in advance of the meeting.

Sincerely, Kyle

On Mon, Jun 8, 2015 at 2:38 PM, <jmorrison@powderriverbasin.org> wrote:

Kyle, looking forward to meeting with you. Shannon will propose a date. Congratulations and good luck with the move. Best, Jill Morrison

On 2015-06-07 17:17, Kyle Wendtland wrote:

> Dear Shannon:
>
> I agree, and would like to schedule this meeting with the Powder River
> Basin Resource Council and review the report provided. I have meetings
> scheduled the week of June 15th, and will be traveling and moving to
> Cheyenne the week of June 22nd. If possible it would be best in my
> schedule if we could work toward a potential date the week of July
> 6th. Please let me know if there are dates during that week that would
> work with your schedule.
>
> Sincerely, Kyle
>
> On Wed, Jun 3, 2015 at 4:31 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
>
>> Dear Kyle, DEQ staff, and Jerimiah,
>>
>> We would like to set up a meeting with you to get to know Kyle and
>> to touch base with the DEQ staff about some of our current concerns.
>>
>> The Western Organization of Resource Councils, of which we are a
>> member group, is about to publicly release the attached report, and
>> we would like to sit down with you to discuss its findings,
>> specifically on reclamation and self-bonding. We'd also like to
>> learn more about the self-bonding program in general.
>>
>> We are available for a meeting June 16, 17, 18, or 24 if any of
>> those days work for you. We could come to Cheyenne as we know that
>> would be most convenient for your staff.

> Please let us know if there is a date and time that works for a
> meeting.
>
> Thank you,
>
> Shannon
>
> Shannon Anderson
>
> Powder River Basin Resource Council
>
> 934 N. Main St., Sheridan, WY 82801
>
> 307-672-5809 [1] cell: 307-763-0995 [2]
>
> sanderson@powderriverbasin.org
>
> Join us at www.powderriverbasin.org [3]
>
> Follow us at https://twitter.com/PRBResCouncil [4]

--

Kyle J. Wendtland

Administrator

Department of Environmental Quality

Land Quality Division

122 W. 25th Street

Herschler Building, 3W

Cheyenne, Wyoming 82002

307-777-7046

Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

Links:
---
[1] tel:307-672-5809
[2] tel:307-763-0995
[3] http://www.powderriverbasin.org/
[4] https://twitter.com/PRBResCouncil

--

Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

--

Jeffrey W. Fleischman

Chief, Denver Field Division

150 East B St. RM 1018

Casper, WY 82601

Office 307-261-6550

Cell 307-258-0334

Fax 307-261-6552

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Jeffrey W. Fleischman

Chief, Denver Field Division

150 East B St. RM 1018

Casper, WY 82601

Office 307-261-6550

Cell 307-258-0334

Fax 307-261-6552

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046

Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Matt Kunze
To:	dbrown@wwcengineering.com
Cc:	Bj Kristiansen
Subject:	Hidden Water Creek data - Big Horn Mine
Date:	Wednesday, July 08, 2015 7:43:53 AM
Attachments:	Hidden Water Creek Data_Big Horn Mine.xlsx

Hi Dale,

Sorry I was out of the office on vacation and missed your call last week. I've attached what we have in our database for the station the Big Horn Mine operated on Hidden Water Creek. If you have any questions about the data, please let me know. Please note it may not be a comprehensive record of data from the station.

Just to keep Bj in the loop...this relates to one of my comments on the Brook Mine permit application.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MINE_NAME	SAMP_STATION_NAME	SAMP_DATE	PARAMETER_NAME
BIG HORN	HWC1-79	3/22/1979	FIELD PH
BIG HORN	HWC1-79	3/22/1979	FIELD SP CONDUCTANCE AT 25 C
BIG HORN	HWC1-79	3/22/1979	FIELD WATER TEMP
BIG HORN	HWC1-79	4/9/1979	FIELD PH
BIG HORN	HWC1-79	4/9/1979	FIELD SP CONDUCTANCE AT 25 C
BIG HORN	HWC1-79	4/9/1979	FIELD WATER TEMP
BIG HORN	HWC1-79	4/16/1979	FIELD SP CONDUCTANCE AT 25 C
BIG HORN	HWC1-79	4/16/1979	FIELD WATER TEMP
BIG HORN	HWC1-79	3/11/1980	FIELD PH
BIG HORN	HWC1-79	3/11/1980	FIELD SP CONDUCTANCE AT 25 C
BIG HORN	HWC1-79	3/11/1980	FIELD WATER TEMP

PARAMETER_VALUE	ANALYTICAL_METHOD	COMMENTS	LOAD_REF
8.6			1
4000			1
8.5			1
7.6			1
3500			1
20			1
3283			1
17.2			1
6.62			1
1390			1
5			1

SOURCE

bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA
bhc_analysis.xls_REC'D 8/8/08 FROM TYLER REED @ AQUA TERRA

From:	Dale Brown
To:	Matt Kunze
Cc:	Bj Kristiansen; Jeff Barron
Subject:	RE: Hidden Water Creek data - Big Horn Mine
Date:	Wednesday, July 08, 2015 7:47:14 AM
Attachments:	image001.jpg

Matt,

Thanks for providing this data.

Dale

Dale Brown, P.E. | Mining Department Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Fax 307-674-4265
www.wwcengineering.com

From: Matt Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, July 08, 2015 7:44 AM
To: Dale Brown
Cc: Bj Kristiansen
Subject: Hidden Water Creek data - Big Horn Mine

Hi Dale,

Sorry I was out of the office on vacation and missed your call last week. I've attached what we have in our database for the station the Big Horn Mine operated on Hidden Water Creek. If you have any questions about the data, please let me know. Please note it may not be a comprehensive record of data from the station.

Just to keep Bj in the loop...this relates to one of my comments on the Brook Mine permit application.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

WWC
ENGINEERING

From:	Kyle Wendtland
To:	Shannon Anderson
Cc:	Alan Edwards; Jill Morrison; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush
Subject:	Re: Meeting with New LQD Administrator on Powder River Coal Concerns
Date:	Thursday, July 09, 2015 10:37:39 AM

Dear Shannon:

Thank you for making time to meet with us while you were in Cheyenne. We appreciate the open communication and look forward to meeting with you in the future.

Kyle

On Thu, Jul 9, 2015 at 8:44 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle & Alan,
>
> I just wanted to thank you for meeting with us yesterday. We found the meeting productive and useful and we hope you did too. We believe it's important to keep the communication lines open and we hope this was just the first of many opportunities to discuss our concerns. We'll be following up on a few items soon.
>
> Thanks again,
>
> Shannon
>
> Shannon Anderson
>
> Powder River Basin Resource Council
>
> 934 N. Main St., Sheridan, WY 82801
>
> 307-672-5809 cell: 307-763-0995
>
> sanderson@powderriverbasin.org
>
> Join us at www.powderriverbasin.org
>
> Follow us at https://twitter.com/PRBResCouncil
>
> **From:** Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
> **Sent:** Monday, July 06, 2015 10:23 AM
> **To:** Shannon Anderson
> **Cc:** Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah

Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Yes, we are scheduled to meet with you July 8, 2015 at 8:00 am. We will be meeting in the Bighorn conference room at the Herschler Building 4th floor west.

Thank you, Kyle

On Mon, Jul 6, 2015 at 9:54 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Hi Kyle, I just wanted to check in and confirm that the agenda looks ok to you for our meeting on Wednesday morning. Also wanted to confirm that we should come to the Herschler Building 3rd floor West or has LQD moved yet? Thanks, Shannon

---

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Wednesday, June 24, 2015 11:35 AM
To: <sanderson@powderriverbasin.org>
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Good morning Shannon

Thank you for the updated information I will review in detail early next week

Kyle

Sent from my iPhone

On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Dear Kyle & Alan (and others):

Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).

Our proposed agenda is

1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion

2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?

3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies

4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?

5. (if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?

We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.

Thanks, and I look forward to seeing you on July 8th.

Shannon

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Thomas Sansonetti
To:	andrew kuhlmann
Subject:	Ramaco"s Response to WLDQ concerning Wyoming AG comments
Date:	Friday, July 10, 2015 7:35:10 PM
Attachments:	attachment_C_201507061409.pdf Attachment_D_memorandum_summary_judgement.pdf attachment_E_Plantiffs_reply_summary_judgement.pdf JB Response to LQD about 35-11-406(b)(xi) 07062015 ATW.docx attachment_B_1954_deed.pdf

---

Hi Andrew!

I would like to come see you again concerning the Ramaco permit application to open its mine in Sheridan County sometime after the Motion for Summary judgment hearing on July 23 occurs before Judge Edelman in Sheridan. That hearing will provide the latest update on how the access issue is working out with Ambre/Big Horn Coal.

I will be in Cheyenne August 10 and 11. Would one of those days work for me to come visit with you? The attached documents were filed by Ramaco this week in response to the latest round of comments made by state officials on the Ramaco application.

Hope your summer is supplying some fun along with your workload! Tom

723 P.2d 1230
Supreme Court of Wyoming.

WYMO FUELS, INC., Appellant (Respondent),
Environmental Quality Council, Department of Environmental Quality, (Respondents)
v.
Guy W. EDWARDS, Ruth A. Edwards, Clarke K. Mills, and Doris I. Mills, Appellees (Petitioners).
ENVIRONMENTAL QUALITY COUNCIL, DEPARTMENT OF ENVIRONMENTAL QUALITY, Appellants (Respondents),
WYMO Fuels, Inc., (Respondent),
v.
Gny W. EDWARDS, Ruth A. Edwards, Clarke K. Mills, and Doris I. Mills, Appellees (Petitioners).

Nos. 85–227, 85–228. | Aug. 14, 1986.

Landowner sought mining permit to mine coal under lands owned by state. The Environmental Quality Council held hearing on objections filed by adjoining landowners and upheld issuance of permit. Landowner sought judicial review. The District Court, Campbell County, Terrence L. O'Brien, J., reversed determination, and appeal was taken. The Supreme Court, Thomas, C.J., held that condemnation of way of necessity for railroad spur track and mine truck haul road, according to statute, dispensed with statutory requirement that resident or agricultural landowner or surface landowner consent to mining operation.

Judgment of district court reversed and order of Environmental Quality Council reinstated.

Attorneys and Law Firms

***1231** Alan B. Minier and Thomas A. Nicholas, Hirst & Applegate, Cheyenne, for appellant WYMO.

A.G. McClintock, Atty. Gen. and Steven R. Shanahan, Sr. Asst. Atty. Gen., Cheyenne, for appellants Wyoming Environmental Quality Council and Wyoming Dept. of Environmental Quality.

Tom C. Toner, Redle, Yonkee & Arney, Sheridan, for appellees Edwards.

Rebecca W. Thomson and Richard M. Davis, Jr., Burgess & Davis, Sheridan, for appellees Mills.

Before THOMAS, C.J., and BROWN, CARDINE, URBIGKIT and MACY, JJ.

Opinion

THOMAS, Chief Justice.

The issue to be resolved in this case is whether condemnation of a way of necessity for a railroad spur track and a mine truck haul road, according to statute, dispenses with the statutory requirement that a resident or agricultural landowner or a surface landowner consent to mining operations, or an order in lieu of such consent in the case of the latter kind of ownership, be included in an application for a mining permit. The Department of Environmental Quality ruled that the resident or agricultural or surface landowner consent was not required because if it were, the right acquired pursuant to the eminent domain proceeding would be defeated. The district court held that an owner of land which had been condemned for such an easement was a surface owner for purposes of the mining permit statute and that consent, or, if appropriate, an order in lieu thereof, still must be included in the mining permit application after the condemnation order was entered. Other incidental issues are asserted by the parties, but essentially the dispute is resolved by our determination of this primary issue. We hold that after condemnation of such an easement the owner of the servient estate is not a surface owner for purposes of the

WestlawNext © 2014 Thomson Reuters. No claim to original U.S. Government Works.

mining permit application statute, and we reverse the order of the district court.

The several parties in these cases have submitted detailed statements of the issues.[1] The cases are resolved, however, by ***1232** disposition of these issues as presented by the parties:

1 The parties set forth the issues in their respective briefs as follows:

Appellant WYMO Fuels, Inc.:

"A. DID THE ENVIRONMENTAL QUALITY COUNCIL ERR IN REFUSING TO REQUIRE EVIDENCE OF SURFACE OWNER CONSENT OBTAINED FROM APPELLEES MILLS OR EDWARDS PURSUANT TO W.S. 1977, § 35–11–406(b)(xi)?

"B. DID THE ENVIRONMENTAL QUALITY COUNCIL MAKE ITS DECISION ON THE PERMIT APPLICATION IN ACCORDANCE WITH ALL PROCEDURES AND STANDARDS REQUIRED BY LAW?"

Appellants Department of Environmental Quality and Environmental Quality Council:

"I. DID THE ENVIRONMENTAL QUALITY COUNCIL ERR IN REFUSING TO REQUIRE A COAL MINE APPLICANT TO SHOW EVIDENCE OF CONSENT FROM SURFACE LANDOWNERS ADJACENT TO THE LAND TO BE MINED IN ACCORDANCE WITH W.S. 35–11–406(b)(xi)?

"II. WAS THE ENVIRONMENTAL QUALITY COUNCIL'S DECISION TO REQUIRE THE APPELLEES TO MAKE A PRIMA FACIE CASE ON THEIR OBJECTIONS TO A COAL MINE PERMIT IN ACCORDANCE WITH ACCEPTABLE PROCEDURES AND STANDARDS REQUIRED BY LAW?"

Appellees Mills:

"1. Is Mills a resident or agricultural landowner or a surface owner under the terms of the landowner consent statute, § 35–11–406(b)(xi)(xii)?

"2. Was the decision of the Council that Mills was not a resident or agricultural landowner supported by substantial evidence?

"3. Does the fact that Mills' property was condemned by WYMO for part of its mine permit area negate the statutory requirement for landowner consent to the mine and reclamation plan?

"4. Does the fact that the utility power line corridors, built solely to service the WYMO mine, is owned by Tri-County Electric exempt it from the landowner consent provisions, § 35–11–406(b)(xi)(xii)?

"5. Did the Council observe the procedures required by law when it shifted the burden of proof from the Appellant WYMO to the Appellees?"

Appellees Edwards:

"1. Is the order of the District Court reversing and remanding the decision of the Environmental Quality Council for a new hearing a final, appealable order or judgment?

"2. Do the surface consent requirements of the Wyoming Environmental Quality Act apply to all lands within the permit area upon which surface mining operations are to be conducted or only to the lands which will be mined?

"3. Does a condemnation order granting an applicant for a mining permit an easement to use a landowner's property for a coal haul road and a railroad spur line dispense with the surface owner consent requirements of the Wyoming Environmental Quality Act?

"4. Has WYMO met the surface owner consent requirements of the Wyoming Environmental Quality Act for its power lines and utility corridors which are required to be in the permit area but for which WYMO does not have landowner consent for such utilities and does not have a condemnation order granting WYMO the right to place such utilities on Appellees' lands?

"5. Did the Environmental Quality Council improperly shift the burden of proof in the contested case hearing from the Appellant WYMO, who is the applicant for the mining permit, to the Appellees, who are the landowners?"

Appellant WYMO Fuels, Inc.:

> "A. DID THE ENVIRONMENTAL QUALITY COUNCIL ERR IN REFUSING TO REQUIRE EVIDENCE OF SURFACE OWNER CONSENT OBTAINED FROM APPELLEES MILLS OR EDWARDS PURSUANT TO W.S. 1977, § 35–11–406(b)(xi)?"

Appellants Department of Environmental Quality and Environmental Quality Council:

> "I. DID THE ENVIRONMENTAL QUALITY COUNCIL ERR IN REFUSING TO REQUIRE A COAL MINE APPLICANT TO SHOW EVIDENCE OF CONSENT FROM SURFACE LANDOWNERS ADJACENT TO THE LAND TO BE MINED IN ACCORDANCE WITH W.S. 35–11–406(b)(xi)?"

Appellees Mills:

> "3. Does the fact that Mills' property was condemned by WYMO for part of its mine permit area negate the statutory requirement for landowner consent to the mine and reclamation plan?"

Appellees Edwards:

> "3. Does a condemnation order granting an applicant for a mining permit an easement to use a landowner's property for a coal haul road and a railroad spur line dispense with the surface owner consent requirements of the Wyoming Environmental Quality Act?"

As a preliminary matter, we also will address the question raised by the appellees Edwards as to whether a final, appealable order or judgment was entered by the district court.

WYMO Fuels, Inc. (hereafter WYMO) proposed to mine coal under lands owned by the State of Wyoming in the Powder River Basin. Processing facilities were to be located on lands owned by WYMO. On October 7, 1980, WYMO filed an application for a mining permit with the Land Quality Division of the Department of Environmental Quality. The Edwards and the Mills are sheep ranchers who own lands adjoining the lands to be mined by WYMO. Both the mine truck haul road and the railroad spur track contemplated by the permit application as necessary for the mining operations would traverse the lands of both the Mills and the Edwards. The application for the mining permit was rejected because it did not include the landowner consents according to the statute.

Section 35–11–406(b), 406(b)(xi) and (xii), W.S.1977, provides in pertinent part:

***1233** "(b) The application shall be accompanied by * * *

"(xi) * * * [A]n instrument of consent from the resident or agricultural landowner, if different from the owner of the mineral estate, granting the applicant permission to enter and commence surface mining operation, and also written approval of the applicant's mining and reclamation plan. As used in this paragraph, 'resident or agricultural landowner' means a natural person or persons who, or a corporation of which the majority stockholder or stockholders:

"(A) Hold legal or equitable title to the land surface * * * acquired prior to January 1, 1970, * * *

"(B) Have their principal place of residence on the land, or personally conduct * * * ranching operations upon a * * * ranch unit to be affected by the surface mining operation, * * *.

"(xii) * * * [A]n instrument of consent from the surface landowner * * * to the mining and reclamation plan. If consent cannot be obtained as to the mining plan or reclamation plan or both, the applicant may request a hearing before the environmental quality council. The council shall issue an order in lieu of consent if it finds:

"(A) That the mining plan and reclamation plan have been submitted to the surface owner for approval;

"(B) That the mining plan and the reclamation plan is detailed so as to illustrate the full proposed surface use including proposed routes of egress and ingress;

"(C) That the use does not substantially prohibit the operations of the surface owner;

"(D) The proposed plan reclaims the surface to its approved future use, in segments if circumstances permit, as soon as feasibly possible."

The Mills and the Edwards had refused to negotiate with WYMO for easements across their lands. Apparently their position was mandated by 20–year leases of surface rights to their lands which they previously had entered into with Neil Butte

Company. When landowner consent for the railroad spur track and the mine truck haul road was sought from the Mills and the Edwards, WYMO was referred to Neil Butte Company, and it was not successful in obtaining that consent. The circumstances indicate that Neil Butte Company preferred to preserve its competitive position with respect to mining coal, although it never has obtained a mining permit.

Frustrated by the apparent refusal of the Mills, the Edwards, and Neil Butte Company to negotiate and agree to an easement for the railroad spur track and the mine truck haul road, WYMO proceeded in the United States District Court for the District of Wyoming to condemn the necessary easements pursuant to § 1–26–401, W.S.1977, [since repealed by S.L. of Wyoming 1981, ch. 174, § 3, and now appearing at § 1–26–815, W.S.1977 (1986 Cum.Supp.); S.L. of Wyoming 1981, ch. 174, § 1]. The statute pursuant to which WYMO Fuels proceeded provides in pertinent part:

> "(a) Any person * * * or corporation authorized to do business in this state may appropriate by condemnation a way of necessity over, across or on so much of the lands or real property of others as necessary for the location, construction, maintenance and use of * * * electric power transmission lines, * * * spur tracks * * * or mine truck haul roads required in the course of their business for * * * mining * * * purposes, or for the transportation of coal from any coal mine * * *.
>
> "(b) The right of condemnation may be exercised for the purpose of:
>
> "(i) Acquiring new ways of necessity;
>
> ---
>
> "(d) A way of necessity for a mine truck haul road shall not be granted except where no other reasonable and practicable way is available. The petitioner for a mine truck haul road way of necessity shall show that his petition is made in ***1234** good faith, that no other reasonable and practical way is available and that the mining operation is economically feasible * * *.
>
> ---
>
> "(f) * * * [T]he way of necessity appropriated is for a surface easement or right-of-way only, and shall not include * * * the underlying minerals or mineral estate. * * * [C]ompensation shall not be awarded for * * * the * * * mineral estate, but only for the actual rights and property claimed and appropriated."

In December of 1980, the United States District Court granted the relief requested by WYMO. The Order Granting Immediate Possession recited in pertinent part that:

> " * * * Plaintiff * * * is hereby granted leave to enter upon and take possession of a permanent right-of-way easement to lay, maintain, inspect, replace, erect, operate and remove a railroad spur track and mine truck haul road, and appurtenances, over, through, upon, and across the real property described in the Plaintiff's Complaint for Condemnation immediately upon the Plaintiff's obtaining a mining permit from the Department of Environmental Quality of the State of Wyoming."

WYMO then included the order of the United States District Court for condemnation of the railroad spur track, mine truck haul road and appurtenances as a part of its application for a mining permit. The director of the Department of Environmental Quality issued WYMO a mining permit on September 28, 1981, but on December 21, 1981, the Mills and the Edwards filed their formal objections to this permit acquisition.

The Environmental Quality Council held a hearing on the objections filed by the Mills and the Edwards at the end of March, 1982. The Mills and the Edwards relied upon their status as resident or agricultural landowners as well as their status as surface landowners. On October 1, 1982, the Environmental Quality Council entered its findings of fact and conclusions of law which upheld the issuance of the permit. The order of the Environmental Quality Council states in pertinent part that:

WestlawNext © 2014 Thomson Reuters. No claim to original U.S. Government Works.

"FINDINGS OF FACT

"13. The United States District Court, District of Wyoming, The Honorable Clarence Brimmer, after a trial with Protestants issued an Order pursuant to Wyoming Statutes 1–26–401 granting the right of eminent domain to WYMO Fuels over portions of land owned by Protestants Mills and Edwards. The Order granted a permanent easement to the Applicant. The Land Quality Division accepted this Order in lieu of Land Owner Consent. The Order provided that appropriation was dependent upon just compensation being provided to the protestant.

"CONCLUSIONS OF LAW

"15. The record does not contain sufficient evidence to support the conclusion that the application for the proposed operation is not accurate and complete as required by the Environmental Quality Act.

"17. The record does not contain sufficient evidence to support the conclusion that any of the Protestants are resident or agricultural landowners in that there is not a sufficient showing on the record that any of the Protestants have held legal or equitable title to the land surface directly or through stockholdings since before January 1, 1970, or have been acquired through descent, inheritance or by gift or conveyance from a member of the immediate family of such owner.

"18. Landowner consent to disturbance of the access is not required in this case in that tbe United States District Court for the District of Wyoming, in accordance with Wyoming law, has ordered the ***1235** appropriation by the applicant of such lands subject to landowner consent upon the payment of just compensation for such appropriation, and in that the landowners' consent would defeat the right acquired in the eminent domain proceeding."

The Mills and the Edwards filed a petition for review in the district court, pursuant to the Wyoming Administrative Procedure Act (§§ 16–3–101 et seq., W.S.1977) and Rule 12, W.R.A.P., in November of 1982. On August 13, 1985, the district court issued an opinion letter which indicated its intention to reverse the decision of the Environmental Quality Council and remand the case back to the Council. That letter recited in pertinent part:

" * * * [P]etitioners are clearly surface owners and have not consented to the mining and reclamation plans (and the council has not made the findings in lieu of consent).

"The Council decided petitioner's consent was not necessary. In the Council's view they are no longer surface owners because WYMO obtained a rail and haul road easement across their lands by right of Eminent Domain in Federal District Court * * *. That conclusion cannot stand if the Environmental Quality Act (EQA) is to be given a fair reading."

The order which was entered by the trial court on August 30, 1985, declared:

> "IT IS, THEREFORE, HEREBY ORDERED, ADJUDGED AND DECREED by the Court that for the reasons stated in the Court's letter opinion of August 13, 1985, the Findings of Fact, Conclusions of Law and Order entered by the Environmental Quality Council on October 1, 1982 be, and the same is, hereby reversed and remanded for a new hearing."

WYMO, the Environmental Quality Council, and the Department of Environmental Quality have taken their respective appeals from this order of the district court.

[1] As a preliminary matter we briefly address the contention of the Edwards as appellees that the order appealed from is not a final, appealable order or judgment. This issue was raised earlier by a Motion to Dismiss the appeal pursuant to Rule 1.05, W.R.A.P. At that time, the court entered an Order Denying Motion to Dismiss Appeal, but the order denying the motion was made without prejudice to the right of the Edwards to renew the issue at oral argument. The court has considered this argument a second time, and we are persuaded that the order of the district court does affect a substantial right of the Environmental Quality Council, the Department of Environmental Quality, and WYMO. In the absence of that order, the issuance of a mining permit by the Department of Environmental Quality to WYMO would be effective, and if the district court were wrong in its ruling with respect to the law, those parties are entitled to test the legal validity of that rule. The order prevents a judgment in favor of the issuance of the permit and therefore is a final appealable order under Rule 1.05(1), W.R.A.P. *Big Horn County Commissioners v. Hinckley,* Wyo., 593 P.2d 573 (1979).

The essential claim of the Mills and the Edwards is that even though a way of necessity has been obtained across their lands by virtue of the condemnation proceedings in the United States District Court; they still have the status of surface owners with respect to the lands crossed by the easement. They insist that because of the provisions of § 35–11–406(b)(xi) and (xii), W.S.1977, they, in effect, have a veto over the permit process because the permit cannot be granted in the absence of their consent. The decree of the United States District Court granted WYMO the right to "enter upon and take possession of a permanent right-of-way easement" for certain purposes. Succinctly stated, the question is, whether after the condemnation the Mills and the Edwards or WYMO held the rights of the surface owner under the statute.

***1236** There can be little argument that historically the owner of a mineral estate was permitted to make reasonable use of the surface for the purpose of mineral development. *Sanford v. Arjay Oil Co.,* Wyo., 686 P.2d 566 (1984); 4 Summers Oil and Gas § 652 (1962). See Brimmer, *The Rancher's Subservient Surface Estate,* V Land & Water L.Rev. 49 (1970). A right of access to the land under which minerals were owned was secured by the Constitution and by statute. Article 1, § 32 of the Constitution of the State of Wyoming; § 1–26–401, W.S.1977, and previous similar enactments. At one time the Wyoming statute permitted the taking of a fee interest for such a way of necessity. Section 49–46, W.C.S.1920, discussed in *Meyer v. Colorado Central Coal Company,* 39 Wyo. 355, 271 P. 212 (1928), reh. denied 274 P. 1074 (1929). The statute in vogue at the time of the condemnation by WYMO provided that " * * * the way of necessity appropriated is for a surface easement for right-of-way only * * *. [C]ompensation shall not be awarded for * * * the * * * mineral estate, but only for the actual rights and property claimed and appropriated." Section 1–26–401(f), W.S.1977, S.L. of Wyoming 1907, ch. 52, § 1, as amended.

[2] [3] We have said that the owner of the surface estate and the owner of an easement each possess rights. *Wallis v. Luman,* Wyo., 625 P.2d 759 (1981); *Bard Ranch Company v. Weber,* Wyo., 557 P.2d 722 (1976). See also *Lingle Water Users' Association v. Occidental Building & Loan Association,* 43 Wyo. 41, 297 P. 385 (1931). We have, however, accepted the proposition that the rights of the owner of the easement are paramount to the extent of the easement and include all rights incident or necessary to its proper enjoyment. The owner of the servient estate retains only such incidents of ownership as are not inconsistent with the easement. *Bard Ranch Company v. Weber,* supra. This case might well be decided by simply pointing out that the rights afforded by the provisions previously quoted from the Environmental Quality Act are inconsistent with the proper enjoyment of the easement obtained by condemnation and, therefore, were not retained by the Mills and the Edwards.

[4] [5] We also note the rule which we have espoused that statutes relating to the same subject should be harmonized where possible. *Department of Revenue and Taxation v. Irvine,* Wyo., 589 P.2d 1295 (1979). The condemnation statute (§ 1–26–401, W.S.1977, now § 1–26–815, W.S.1977 (1986 Cum.Supp.)) and § 35–11–406, W.S.1977, a part of the Wyoming Environmental Quality Act, both relate to the respective rights of WYMO, the owner of the easement, and the Mills and the

Edwards, the landowners. The provisions of § 35–11–406(b)(xi) and (xii), W.S.1977, apparently extend a surface owner the right to prevent unreasonable use of the surface by a mineral owner so that the surface owner is afforded an opportunity to protect his interests in advance of any development by the mineral owner. On the other hand, the condemnation statute represents a policy of assuring access for the development of mineral lands. We harmonize these two statutes in the context of this case by our holding that the Mills and the Edwards are not surface owners after the condemnation judgment. The ruling of the district court afforded paramount efficacy to the Wyoming Environmental Quality Act, and in net effect permitted the owners of the servient estates to foreclose the use of the WYMO easement, perhaps even more effectively than if they had erected bars across the easement. Our holding affords efficacy to the condemnation statute, and at the same time permits the invocation of the Wyoming Environmental Quality Act when appropriate to protect the interests of a resident or agricultural landowner or surface owner.

In this instance the Mills and the Edwards were left with no interest which required protection pursuant to the Wyoming Environmental Quality Act. We call attention to *Energy Transportation Systems, Inc. v. Mackey,* Wyo., 650 P.2d 1152 (1982), and *Coronado Oil Company v. Grieves,* Wyo., 603 P.2d 406 (1979). In ***1237** both cases this court assumed the propriety of the eminent domain statutes and the authority conferred by them to appropriate private property for public use without consent. In *Snell v. Ruppert,* Wyo., 541 P.2d 1042 (1975), we held that the whole concept of eminent domain is the taking of private property without the owner's consent. Such taking, however, requires that just compensation be paid to the landowner. That compensation is the difference in value of the entire parcel of land before the taking and after the taking. Conceptually that amount would be the same amount as required to compensate the owner of the surface estate for damages caused by unreasonable use of the surface in the development of the mineral estate. In theory then, the Mills and the Edwards have been compensated for whatever damage the construction of the railroad spur track and the mine truck haul road would inflict upon their lands. They could recover no more for damages after use by the owner of a mineral estate which caused damage beyond that reasonably necessary for development. The net effect is that the Mills and the Edwards had no interest left which required the protection of the Wyoming Environmental Quality Act, and, therefore, they should not be afforded the rights of surface owners under that statute.

[6] This was the approach taken by the Department of Environmental Quality and the Environmental Quality Council. The construction of a statute by an agency charged with its execution is entitled to consideration in a case in which the application and construction is an issue for the courts. *Demos v. Board of County Commissioners of Natrona County,* Wyo., 571 P.2d 980 (1977). In this instance the Wyoming Environmental Quality Council correctly construed the statute, and its order granting the mining permit should be upheld. The order of the district court which reversed the order of the Environmental Quality Council upholding the issuance of a coal mining permit to WYMO and which remanded the case to the Council for further hearings is reversed. The order of the Environmental Quality Council is reinstated.

Our holding with respect to the issue of whether the Mills and the Edwards still possess the right of resident or agricultural or surface owners to insist upon their consent to the permit disposes of the burden of proof issue argued by the parties. It is moot. The parties also expressed concern about whether the condemnation judgment entered by the United States District Court would afford authority to construct electric utility lines within the easement. The order specifically encompasses "appurtenances," and were we specifically charged with construction of the federal judgment we would conclude that the easement possessed by WYMO would encompass that use. Nothing would be accomplished by any insistence that the utility company bring a separate eminent domain proceeding to condemn the right to use the easement for utility lines.

The judgment of the district court is reversed and the order of the Environmental Quality Council is reinstated.

End of Document

© 2014 Thomson Reuters. No claim to original U.S. Government Works.

IN THE DISTRICT COURT, FOURTH JUDICIAL DISTRICT, IN AND FOR SHERIDAN COUNTY, WYOMING

BROOK MINING COMPANY, LLC, a Wyoming limited liability company, and RAMACO WYOMING COAL, LLC, a Wyoming limited liability company, Plaintiffs, vs. BIG HORN COAL COMPANY, a Wyoming corporation, Defendant.	Civil No. CV 2014-372

PLAINTIFFS' MEMORANDUM IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT

SUMMARY OF THE MEMORANDUM

I. The Plaintiffs have the right to use the surface described in the 1954 Deed as necessary or convenient to operate a surface coal mine.

A. The plain, unambiguous language of the 1954 Deed proves that the Plaintiffs have the right to use the surface to mine coal. Neither side contests that this language exists or that the Plaintiffs have the right to mine coal.

B. The circumstances surrounding the Deed also prove that the Plaintiffs planned surface use fits within the rights reserved. The Defendant's mining permits and supporting documents reflect the original parties' intent that the Plaintiffs would enjoy the right to use the surface to conduct of future surface mining.

II. The 1954 Deed is not unconscionable. The Wyoming Supreme Court has refused to apply the doctrine of unconscionability and it would refuse to apply it to this case.

III. The accommodation doctrine does not apply because the 1954 Deed controls the rights of the parties to this dispute. That Deed gives the Plaintiffs the right to use the surface as necessary or convenient to mine coal.

IV. Wyoming Statute § 35-11-406 does not preempt the damage limitation in the 1954 Deed. The statute does not apply retroactively to the Deed. And even if it did, Section 35-11-406 does not have any provisions that would apply to this case.

INTRODUCTION

This case concerns the unambiguous language in a 1954 deed reserving the right to extract coal and use the surface as is "necessary or convenient" to extract that coal. Sixty years ago, Big Horn Coal Company (BHC) purchased the surface of lands where it intended to mine coal. The seller, Sheridan-Wyoming Coal (SWC), reserved to itself the mineral estate and a broad surface use right to access that mineral estate. SWC's successors in interest Brook Mining Company, LLC and Ramaco Wyoming Coal, LLC (collectively with Brook referred to as Ramaco) intend to make use of SWC's reservation to own and operate the Brook coal mine.[1] BHC has opposed that plan and now denies that Ramaco has rights to use the surface.

Ramaco has asked this Court to declare the parties' respective rights to end this dispute. Specifically, Ramaco requests that this Court declare that the 1954 Deed language enables it to use BHC's surface to conduct all necessary coal mining activities. This includes designing,

[1] Brook Mining Company LLC is a subsidiary of Ramaco. The mine plan relevant to this dispute is in Brook's name (The Brook mine plan).

planning, permitting, mining the Brook mine and building a railroad spur load out track and related facilities to remove, process, and ship that coal.

The Court should declare that Ramaco has these rights because Wyoming's rules of contract interpretation mandate this result. The plain meaning of the 1954 Deed gives Ramaco the right to use the surface as "necessary or convenient" to mine coal, which includes all of the items discussed above. Even BHC does not deny that this language exists. Instead, BHC has tried to use inapplicable common law doctrines and statutes to alter the rights that it had already agreed to allow SWC to reserve. The Court should reject BHC's invitation to alter a contract and violate Wyoming law.

RELEVANT UNDISPUTED FACTS

The sole focus of this case is a deed. SWC issued the deed in 1954, defining its mineral interests and reserving certain surface uses. Ramaco is the successor and assign of SWC. And like SWC, Ramaco got its surface property rights for the land at issue from the 1954 Deed. (Mot. to Dismiss 1/8/15 Tr. 3.) The controlling language in the 1954 Deed provides:

> The Grantor reserving unto itself, its successors and assigns all gas, oil, coal and other minerals contained in all of the above described lands, together with the right to **mine, explore, drill, extract and remove the same**, and **including the right to use as much of the surface of said lands as may be necessary or convenient in order to enable** the Grantor, its successors and assigns to mine, explore, drill, extract and remove said oil, gas, coal and other minerals. And in the event that the Grantor, its successors or assigns, shall hereafter mine, drill, explore, extract and remove gas, oil, coal or other minerals **and shall utilize any part of the surface of said lands** in connection therewith, they shall be free from any liability or claim for damage to the surface of said lands that might be asserted by the Grantee, its successors and assigns, on account of subsidence **or other injury to the surface of said lands resulting from such operations**, except that in case of any such injury Grantor will pay such actual damage as the parties shall agree has been caused to any said lands, or in default of such

> agreement, as shall be determined by arbitration to have been so caused; provided, however, that in no event shall Grantor, its successors or assigns, be obliged to pay for such damage more than Ten Dollars ($10.00) per acre for any of said lands damaged which are dry grazing lands, Fifty Dollars ($50.00) per acre for any said lands damaged which are bottom lands, and Two Hundred Dollars ($200.00) per acre for any of said lands which are irrigated lands.[2]

(Ex. C.) (Emphasis added).[3]

At the time SWC issued this deed and reserved these interests, the original underground methods for extracting coal in the Sheridan coal fields had evolved to include surface mining. A review of Wyoming mining permit records and records for BHC's mining at the time reveal:

- Beginning sometime around 1943, BHC began using new technology to strip mine in the area near the SWC property;
- From that point in time, surface mining methods became more prevalent as technology advanced, costs of underground mining soared, and railroad shipping became less expensive;
- By the time of the 1954 deed, surface mining was the only mining method in use. All of the underground mines in the area described by the 1954 deed and in surrounding lands had been sealed in 1953; and
- From 1953 until the close of BHC's last active mining operation, BHC used only surface mining methods.

(Ex. D; Barron Aff. 5-7.) According to these records, surface mining was the only commercially viable method for mining coal from the lands described in the 1954 Deed for years before,

---

[2] BHC has admitted that the 1954 Deed contains the above-quoted language. (*See* BHC's Ans. to Am. Compl. ¶¶ 9-10.)

[3] All exhibit citations refer to the exhibits attached to the Affidavit of Jeff Barron, P.E. (Barron Aff.)

during, and after the signing of the Deed. When SWC reserved the coal and broad surface use rights, it would have contemplated future surface mining. Its legal arrangements with BHC reflected that.

That same history reveals that BHC knew this. Wyoming's mining permit records for BHC show that BHC initially leased the coal and surface use rights to develop its surface coal mine on lands described in the 1954 Deed from SWC. (Barron Aff. 7; Ex. D.) Shortly after that surface coal mining lease went into effect, BHC purchased the surface of the lands and accepted delivery of the 1954 Deed from SWC. (*Id.*) Knowing that the 1954 Deed broadly reserved mineral surface rights to SWC, BHC chose to renew and amend those lease rights in 1956, 1957, 1977 and 1979. (*Id.*) While operating under that lease, BHC operated a surface coal mine. It also built and used facilities to extract, process, and ship the coal it mined, even using a railroad spur to ship the coal. This is the same coal that Ramaco seeks to mine. (*Id.*)

On May 6, 1983, BHC entered into a Release Agreement of all of the coal that it had leased from SWC. (Ex. F.) In the 1983 Release Agreement, BHC released all rights it had to mine coal under the lands described in SWC's 1954 Deed. (*Id.*[4]) The agreement also had a provision that addressed potential surface uses and surface structures. (*Id.*) In Section 5 of the agreement, SWC agreed that BHC could "leave intact" certain structures related to its previous mining operations that existed on May 6, 1983. (*Id.*) But BHC agreed that it would move certain structures, if SWC or "its successors in interest" presented a plan to mine coal in sections 22 and

[4] All of these accurate, undisputed historical facts are admissible evidence. The information from BHC's own historical Wyoming DEQ surface coal mining permit record for these very lands are admissions of a party opponent. W.R.E. 801(d)(2). The historical State of Wyoming Mine Inspection report records that Mr. Barron recounts are admissible under W.R.E. 803(8).

27, which are covered by the 1954 Deed. (*Id.*) BHC also agreed not to "oppose" that mine plan and not to withhold consent to moving surface structures if consent was required. (*Id.*)

ARGUMENT

I. Ramaco has the right to use the surface described in the 1954 Deed as necessary or convenient to operate a surface coal mine.

Whenever a Court reads a deed, it attempts to derive the intent of the parties, utilizing the plain and ordinary meaning of the language in the deed. *Leeks Canyon Ranch, LLC v. Callahan River Ranch, LLC,* 2014 WY 62, ¶ 14, 327 P.3d 732, 738 (Wyo. 2014). (citations omitted). If the deed is unambiguous, the Court looks only at the four corners of the document. *Id.* (citations omitted) If necessary, the Court can also look to the surrounding circumstances of the parties to the relevant deed at the time of the conveyance to confirm the deed's plain meaning and intent. *Id.* Applying these rules leads to one conclusion—the 1954 Deed reserved to Ramaco the right to use the surface for the operations set out in the Brook mine plan.

A. The plain language of the 1954 Deed proves that Ramaco has the right to use the surface consistent with the Brook mine plan.

The Court can begin and end its analysis with the language in the four corners of the 1954 Deed because neither side contends it contains ambiguous language. *Id.*; (*See* Mot. to Dismiss Tr. 7, 18.) The Court's analysis narrows even further because neither side contests that Ramaco has a right to mine the coal under the land described in the 1954 Deed. (Mot. to Dismiss Tr. 22.) So the Court must decide whether Ramaco's plans fit within its right "to use as much of the surface of said lands as may be necessary or convenient in order to mine, explore, drill, extract and remove said oil, gas, coal and other minerals." (Ex. C.) The Court determines that by using the plain and ordinary meaning of the words. *Leeks Canyon Ranch, LLC,* ¶ 14, 327 P.3d at 738.

The key to this part of the Deed is the phrase "necessary or convenient." Necessary means "absolutely needed," "of an inevitable nature," and "logically" unavoidable. Merriam-Webster.com. (http://www.merriam-webster.com (7 April 2015)). Convenient means "suited to a particular situation" or "affording accommodation or advantage." *Id.* The use of "or" is also significant because it means that Ramaco has alternative rights to use the surface. See, e.g., *Knight ex rel. Knight v. Estate of McCoy*, 2015 WY 9, ¶ 31, 341 P.3d 412, 419 (Wyo. 2015); *Basin Elec. Power Coop. v. State Bd. of Control,* 578 P.2d 557, 566 (Wyo. 1978). Hence, the Court merely must find that Ramaco plans to use the surface in a way consistent with either one of these words.

As it happens, Ramaco's planned operations, detailed in the Brook mine permit application with the State of Wyoming, fall within the meaning of both. Ramaco plan to use the surface to:

- **Remove surface and shallow subsurface overburden to expose and mine the coal;**
- **Build, use, and maintain haul roads;**
- **Build, use, and maintain coal conveyor systems;**
- **Build, use, and maintain overburden and construction spoil pile;**
- **Build, use, and maintain coal dumping, processing, weighing and loading facilities (excluding any use of the existing shop and concrete bridge located on the lands described in the Deed);**
- **Build, use, and maintain a railroad spur for coal loading and shipping for coal mined from lands described in the 1954 Deed;**
- **Build, use, and maintain mining related offices, shops, and equipment servicing and storage areas; and,**
- **Conduct post-mining reclamation activities.**

(Barron Aff. 9.) Each of these planned surface uses is necessary or convenient to mine coal on the lands described in the Deed. Without removing the overburden to expose the coal, no surface

mining can take place—it is physically and logically unavoidable. Without building infrastructure to extract, process, load, and ship the coal, mining could not take place—also logically unavoidable. These same reasons also show that Ramaco's planned operations are suited to the particular situation of mining coal. Simply put, the plain language of the 1954 Deed empowers Ramaco to use the surface consistent with the Brook mine plan. The Court should declare the same.

B. The circumstances surrounding the Deed also prove that Ramaco's planned surface use fits within the rights reserved.

Should the Court need additional evidence that Ramaco has the rights discussed above, the surrounding circumstances existing at the time SWC issued the 1954 Deed provide that evidence. *See Leeks Canyon Ranch, LLC*, ¶ 14, 327 P.3d at 738. When SWC reserved the rights to use the surface to allow for future coal mining, it did so at a time when surface coal mining had become the norm. (Barron Aff. 6-8.) So the phrase "necessary or convenient" interpreted at that time had to refer to those methods for operating a surface coal mine, including all of the items discussed above.

BHC's own undisputed historical surface coal mining operations at the time of the 1954 Deed prove this as well. Shortly after it leased the rights to mine coal from SWC, BHC accepted delivery of the 1954 Deed. At that time, BHC had begun to construct and operate a surface coal mine, using many of the same methods that Ramaco has planned. (*Id.* 7-9; Ex. D, E.) BHC even constructed a railroad spur to load and ship coal—just like the spur that Ramaco has planned. BHC's operations prove that when it accepted the 1954 Deed, it contemplated the same surface uses that Ramaco now proposes.

BHC also contemplated the same surface uses in its 1983 Lease Release Agreement. Even though that agreement focused on releasing any interest BHC had in the mineral estatc, it

also contemplated SWC or its successors in interest using the surface for future coal mining. Section 5 of that agreement gave SWC or its successors the right to make BHC move structures on the surface if it ever had a mine plan for certain sections. In other words, BHC agreed that SWC would have surface use rights if it began mining coal in the future that could require BHC to yield to the mine plan. If BHC had not contemplated SWC using the surface in 1954, it would have had no reason to agree to these provisions.

In short, the parties to the 1954 Deed contemplated future surface mining activities on the lands described in the Deed. So when SWC reserved the right to "use as much of the surface of said lands as may be necessary or convenient," that applied to Ramaco's currently planned surface mining activities.

In the face of the plain language of the 1954 Deed, BHC has asked this Court to limit Ramaco's rights with the doctrine of unconscionability, the Accommodation Doctrine, and W.S. § 35-11-406. None of these doctrines apply.

II. The 1954 Deed is not unconscionable.

BHC alleges, without support or elaboration, that the damage provisions of the 1954 Deed are unconscionable. (BHC's Ans. to Am. Compl. 4.) A plain reading of the terms and conditions of the 1954 Deed in light of Wyoming's long-standing jurisprudence regarding unconscionable contracts, however, proves that BHC's defense does not apply. The Wyoming Supreme Court has analyzed unconscionable contracts several times, each time clarifying the legal standard for unconscionability claims and each time refusing to apply the doctrine. This is true even in cases with far more egregious and one-sided terms than those claimed to exist in the 1954 Deed.

When the Wyoming Supreme Court first analyzed the doctrine of unconscionability, it set out a test that remains true today. *Matter of Frederick's Estate*, 599 P.2d 550 (Wyo. 1979). A court should test unconscionability at the time the parties made the agreement, deciding if at that time "in light of the general commercial background and commercial needs of a particular case, clauses are so one-sided as to oppress or unfairly surprise one of the parties." *Id.* at 556 (citations omitted). To measure this, the Court looks at: whether a party was deprived of a meaningful choice to enter into the contract; whether a party was compelled to accept the terms; whether a party had opportunity for meaningful negotiation; whether gross inequality of bargaining power prevented fair negotiations; whether a party was underprivileged, uneducated, illiterate allowing the other party to deceive or take advantage of them; and whether a party could comprehend and was aware of the agreement or was in some manner surprised by fine print or concealed terms. *Id.* (citations omitted). In the end, the contract must "affront the sense of decency." *Svalina v. Split Rock Land and Cattle Company*, 816 P.2d 878, 882 (Wyo. 1991).

Most recently, the Court divided the analysis discussed above, requiring a party to prove procedural unconscionability and substantive unconscionability. *Pittard v. Great Lakes Aviation*, 2007 WY 64, ¶ 34, 156 P.3d 964, 974 (Wyo. 2007) (citations omitted). Procedural unconscionability evaluates the factors first created in *Fredrick's Estate*. *Id.* at ¶ 34. Substantive unconscionability evaluates whether the contract unreasonable favors one party and affronts a sense of decency. *Id.* at ¶ 34.

Evaluating the 1954 Deed at the time it was executed proves that the Deed was neither procedurally nor substantively unconscionable. BHC's hindsight-based view does not change this. The facts show that two experienced competing coal companies negotiated the 1954 Deed at arms-length with equal bargaining power. BHC freely engaged in negotiations to purchase

limited surface rights that it felt would support its business plans. As the party owning the surface and mineral rights in fee before the 1954 Deed, SWC was not compelled to convey any rights.

In fact, BHC likely could never prove procedural unconscionability. The Wyoming Supreme Court has noted that most courts do not apply the doctrine to contracts between "sophisticated corporations." *Roussalis v. Wyoming Medical Center, Inc.*, 4 P.3d 209, 246 (Wyo. 2000) (citations omitted). The *Roussalis* Court favorably cited a case rejecting an unconscionability claim for an aircraft purchase because "it makes little sense in the context of two large, legally sophisticated companies to invoke the doctrine." *See Continental Airlines v. Goodyear Tire & Rubber Co.*, 819 F.2d 1519, 1527 (9th Cir. 1987). The Court adopted these cases because sophisticated corporations have the advice of counsel and that advice is "circumstantial, if not conclusive, evidence that a contract is not unconscionable." *Roussalis*, 4 P.3d at 246 (citations omitted). BHC and SWC were sophisticated corporations that would have had access to counsel when they agreed to the terms in the 1954 Deed.

Even if BHC could prove procedural unconscionability, the 1954 Deed does not unreasonably favor one party over the other. The Deed shows that SWC conveyed the surface to BHC in return for valuable consideration. As part of that Deed, SWC reserved the mineral estate and rights to use the surface for mineral extraction. Both parties received a benefit through the transaction and both parties assumed certain risks; and BHC enjoyed the benefit of that bargain for over sixty years. Notwithstanding the passage of time and the change in the parties' respective positions, nothing suggests that this deal unreasonably favored one party over another or affronts the sense of decency. It is neither appropriate nor within this Court's power to unilaterally modify the bargain.

In similar cases, the Court has refused to find a contract unconscionable. In *Fredrick's Estate*, a landowner leased property for a gas station in 1957, which included an option to purchase the property for $45,000 subject to certain conditions and limitations. 599 P.2d at 533. Twenty years later, a successor in interest to the gas station sought to enforce the option to purchase and filed suit for specific performance. *Id.* Claiming that the purchase price was too low, the landowner argued the lease and option was unconscionable. The lower court concluded that the option to purchase was unconscionable because the land had increased in value from $35,000 to $80,000 in the years since the initial lease. *Id.* at 554. The Wyoming Supreme Court reversed noting that a change in value alone is not enough to render a contract unconscionable because every future purchase option in a contract bears "[t]he risk of the effects of inflation," which does not then invalidate that contract. *Id.* at 556. The same is true here. BHC knew when it purchased the surface that inflation could occur between 1954 and the time SWC or its successor exercised their reserved rights in the 1954 Deed.

Similar analysis led the Court to reject a claim of unconscionability in *Pittard*. There Mr. Pittard signed a Pilot Training Agreement and a Promissory Note with Great Lakes that made his training free as long as he worked for a minimum of 15 months after completing the training program. *Pittard*, ¶ 4, 156 P.3d at 967. But if Mr. Pittard quit or was fired before satisfying his 15 month commitment he agreed to repay the $7,500 cost of the training. *Id.* Mr. Pittard completed the training but quit his job at Great Lakes after 37 days. *Id.* at ¶ 5, 156 P.3d at 968. After Mr. Pittard refused to reimburse Great Lakes under the Pilot Training Agreement, Great Lakes sued. *Id.* Mr. Pittard argued that the contract was unconscionable. *Id.* at ¶ 8.

The Wyoming Supreme Court affirmed the lower court's ruling in favor of Great Lakes. Although the Court had concerns that the evidence showed some factors of procedural

unconscionability, the Court found no evidence of substantive unconscionability. *Id.* at ¶ 35, 156 P.3d at 974. The *Pittard* Court focused its analysis on the respective rights of the parties and their entitlement to enjoy the benefits of the bargain. The Court held that Great Lakes had agreed "to provide valuable training for free" so "it was not unreasonable for it to require repayment if the employment ended prematurely before it received the benefit of the trained pilot's service." *Id.* Here, BHC acquired the surface and in return allowed SWC to reserve surface rights to mine coal. It is reasonable for SWC's successors to expect BHC to fulfill its bargain.

Indeed, BHC has objected only when SWC's successors in interest want to exercise their surface rights and honor their obligation to compensate BHC for surface damage. In other words, BHC seeks to deprive Ramaco of the benefit of its bargain. To do so, BHC asks this Court to rewrite the very contract BHC has benefitted from for over sixty years. But "[a]fter competent parties have solemnly contracted and agreed to certain conditions, courts should exercise restraint in nullifying the terms thereof or rewriting the contract." *Fredrick's Estate*, 599 P.2d at 556 (citations omitted). BHC's unconscionability argument does not change this rule because the Wyoming Supreme Court has yet to find a contract unconscionable. Nothing here should change that history.

III. The 1954 Deed governs Ramaco's rights to use the surface; the accommodation doctrine is inapplicable.

As explained above, Wyoming law requires this Court to determine the parties' intent in the 1954 Deed from the deed's clear and unambiguous language alone. *Leeks Canyon Ranch, LLC*, ¶ 14, 327 P.3d at 738. Without repeating the arguments above, the Deed's language gives Ramaco the right to use the surface as necessary or convenient to mine coal. Under Wyoming law, this plain language controls Ramaco's rights.

Ignoring Wyoming law, BHC asserts, "Brook/Ramaco's right to use the surface is limited by the Accommodations [sic] doctrine." This defense suggests that a common law doctrine should prevail over an unambiguous contract that set out Ramaco's rights. That is not the law. When the parties have a written contract, their rights and obligations are "not to be determined under any common law obligation apart from the contract" because "the parties have themselves dealt with the question...." See *Wyo. Johnson Inc. v. Stag Indus.*, 662 P.2d 96, 101 (Wyo. 1983) (explaining that the parties had "pre-empted" the common law of indemnity by an express agreement that had specific limits on indemnity) (citations omitted).

This case is an example of why Wyoming law gives precedence to the parties' contract rather than resorting to general common law principles. The Accommodation Doctrine grants mineral lessees a **common law** right to use the surface of land to ensure that they can access their minerals. *Mingo Oil Producers v. Kamp Cattle Co.*, 776 P.2d 736, 741-42 (Wyo. 1989). This common law doctrine limits the right to possess and use so much of the surface "as is reasonably required" to recover the leased minerals. *Id.* The doctrine operates to avoid situations where one who is entitled to extract and develop the mineral estate is prevented from doing so by the holder of the surface estate. Such preclusion would effectively destroy the value of the mineral estate, contrary to well-established public policy. Thus, Wyoming adopted the Accommodation Doctrine to balance the rights of the mineral estate and the surface estate in instances where the parties did not otherwise agree on the respective rights.

While the common law Accommodation Doctrine has its place in certain instances, such is not the case here. Here, the parties' predecessors in interest contracted for a greater set of rights as discussed above. Applying the Accommodation Doctrine would incorrectly limit the parties' rights from those granted in the 1954 Deed. In other words, applying the

Accommodation Doctrine would ignore the broad surface use reservation in the 1954 Deed—an outcome Wyoming law rejects. *Herling v. Wyoming Machinery Co.*, 2013 WY 82, ¶ 52, 304 P.3d 951, 964 (Wyo. 2013) ("cardinal principle" of contract interpretation is not to interpret contracts in a way that renders provisions meaningless).

The solution for the Court is simple—reject the Accommodation Doctrine. Instead, apply the plain language of the 1954 Deed and allow Ramaco to exercise its rights to develop the mineral estate by using "as much of the surface of said lands as may be necessary or convenient." Such is the only approach that will do justice to the parties' intent.

IV. Wyoming Statute § 35-11-406 does not preempt the damage limitation in the 1954 Deed.

BHC asserts as an affirmative defense that W.S. § 35-11-406 describing DEQ's requirements for a mining permit application preempts "the damage limitations in the 1954 Deed." (*See* Def.'s Answer to Am. Compl. 4, Feb. 3, 2015.) For the Court to agree, it would have to violate a basic rule of statutory construction—statutes do not apply retroactively. *See Sierra Club v. Wyoming Dept. of Environmental Quality*, 2011 WY 42, ¶ 40, 251 P.3d 310, 320 (Wyo. 2011) (explaining that Wyoming law is "well-established that statutes are not applied retroactively" unless the statute says so). Section 35-11-406 is part of Wyoming's Environmental Quality Act, which dates back to 1957—three years after SWC executed the 1954 Deed. *See* W.S. § 35-11-101. The Act has no provisions that make it retroactive. As a result, the statute cannot apply to SWC's or its successors rights under the 1954 Deed.

Even if Section 35-11-406 was retroactive, it does not apply because Ramaco already has the legal right to use the surface; the separate landowner consent contemplated in the statute is irrelevant. Wyoming law allows parties to agree upon damage limitations through contract, condemnation, or other legal authority—which is outside the Environmental Quality Act's scope.

See, e.g., City of Gillette v. Hladky Const., Inc., 2008 WY 134, ¶ 46, 196 P.3d 184, 200 (Wyo. 2008). Furthermore, Wyoming statutes already protect BHC's surface from damage by requiring Ramaco to reclaim and post bond.

On its face, Section 35-11-406 says nothing about a surface owner's right to damages from the mineral estate owner. The statute outlines what a mining permit application must include in order to start the review process. *See* W.S. § 35-11-406(a), (b). The statute also outlines a procedure for showing the surface owner consents to the mining and reclamation plans. *See* W.S. § 35-11-406(b)(xi), (xii). If the surface owner does not consent, the mining permit applicant may request a hearing before the Environmental Quality Council (EQC). *See* W.S. § 35-11-406(b)(xii). The council "shall issue an order in lieu of consent" if the applicant shows the mining and reclamation plan are appropriate and "the applicant has the legal authority to extract coal by surface mining methods." *See* W.S. § 35-11-406(b)(xii). The statute, however, is silent on the mineral estate owner's obligations to pay damages to the surface owner.

Section 35-11-406's silence as to damage payments makes perfect sense when, as here, "the applicant has the legal authority to extract coal by surface mining methods." *See* W.S. § 35-11-406(b)(xii). A party possessing the legal authority to develop the mineral estate makes damage payments to a surface owner only when required by that legal authority. Wyoming Department of Environmental Quality (DEQ) statutes apply environmental and planning requirements only to a mining permit applicant, meaning they govern the legal interactions between DEQ and the applicant. DEQ does not impose contractual or legal requirements—for damage payments or anything else—between the mineral and surface estate owners. Such a statute or regulation would be outside the scope of DEQ's authority.

The Wyoming Supreme Court has also concluded that DEQ statutes do not supersede or interfere with appropriate legal authority to mine. *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986). In *WYMO*, the surface owners of adjacent parcels refused statutory consent to the mining plan because a haul road and railroad spur track would cross their land. *Id.* at 1233. After DEQ rejected WYMO Fuel's mining permit application for lack of landowner consent, WYMO Fuels obtained the requisite access rights via a condemnation proceeding. *Id.* at 1234. At a hearing on WYMO Fuel's mining permit application, the EQC recognized WYMO obtained the surface rights it required, so it no longer insisted on surface owner consent. *Id.* at 1234–1235.

The Wyoming Supreme Court affirmed the EQC's reasoning, noting that surface owner rights under DEQ statutes become irrelevant when "inconsistent" with the legal authority granting the mineral estate owner's right to mine. *See id.* at 1236. The Court found that the condemnation proceeding appropriately compensated the surface owners for any damage they would suffer from WYMO Fuel's use. *Id.* at 1237. The "net effect" is the surface owners "had no interest left which required the protection of the Wyoming Environmental Quality Act, and, therefore, they should not be afforded the rights of surface owners under that statute." *Id.*

In this case, the same logic defeats BHC's affirmative defense. Section 35-11-406 has no text that applies it to the contract between the parties or has it supersede the parties' specific ownership interests and rights under the 1954 Deed. As *WYMO* explained, BHC has no interest left that requires the protection of the Environmental Quality Act. In fact, DEQ presumes a deed or contract conferring "legal authority to extract coal by surface mining methods" resolves any damage payment issues that are not addressed in DEQ's statutes. *See* W.S. § 35-11-406(b)(xii).

Even if the 1954 Deed did not provide for damages, the Environmental Quality Act's reclamation and bonding requirements adequately compensate BHC for surface damage. To

complete the mining permit application, the mineral estate owner must plan for proposed future surface use, appropriate grading for the proposed use, vegetation and other surface treatment, "disposal of buildings and structures erected during the operation," and estimate the reclamation plan's total cost. *See* Wyo. Stat. § 35-11-406(b)(ii)–(vi). The reclamation plan also proposes methods for appropriately treating the topsoil and ensuring the affected area does not become polluted or unduly disturbed by "ongoing operations." *See* Wyo. Stat. § 35-11-406(b)(viii)–(ix), (xiii)–(xviii). The reclamation plan ultimately protects the surface owner's interests.

Additionally, the mineral estate owner must post a bond to insure adequate compensation to the surface owner for any damage he or she may suffer. The bond secures payment "for any damages to the surface state, to the crops and forage, or to the tangible improvements of the surface owner." *See* Wyo. Stat. § 35-11-416(a). The mineral estate owner pays these damages to the surface owner "annually" unless the parties otherwise agree. *See id.* Together Ramaco's statutory reclamation plan and bonding will compensate BHC for any damage it suffers above and beyond the compensation for damage under the 1954 Deed's terms.

CONCLUSION

As SWC's successor, Ramaco has all of the rights reserved in the 1954 Deed. This enables Ramaco to use BHC's land to plan, permit, develop, build, operate, and maintain a surface coal mine. These uses are necessary or convenient to mine coal as BHC's previous surface mining proves. To that end, Ramaco simply asks this Court to enforce the plain meaning of the 1954 Deed. None of BHC's affirmative defenses preclude Ramaco's planned surface use.

Therefore, Ramaco requests that the Court enter summary judgment in its favor and declare that: 1) Ramaco owns the rights under the 1954 Deed; and 2) those rights allow Ramaco to use BHC's surface to conduct all "necessary or convenient" coal mining activities, including designing,

planning, permitting, building, and using surface structure for coal mining; 3) the Brook Mine Plan application contains permitted uses of the surface under the 1954 Deed; and 4) the damages in the 1954 Deed are not unconscionable.

Dated this 21st day of April, 2015.

Anthony T. Wendtland – WSB No. 05-2468
Wendtland & Wendtland, LLP
Attorney for Plaintiffs
2161 Coffeen Ave., Suite 301
Sheridan, WY 82801
Telephone: 307.673.4696 / Fax: 307.673.4828

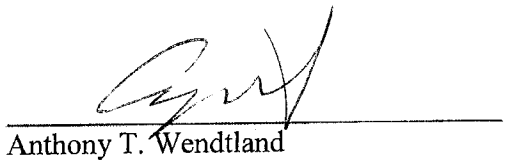
Thomas L. Sansonetti – WSB No. 05-1546
Isaac Sutphin – WSB No. 06-3711
Holland & Hart, LLP
Attorneys for Plaintiffs
2515 Warren Avenue
Cheyenne, WY 82001
Telephone: 307.778.4200 / Fax: 307.778.8175

CERTIFICATE OF SERVICE

I, Anthony T. Wendtland, certify that on the 21st day of April 2015, a true and correct copy of the foregoing Plaintiffs' Memorandum in Support of Plaintiffs' Motion for Summary Judgment was placed in the United States Mail, first class, postage pre-paid and addressed to the following:

Jon T. Dyre
Crowley Fleck, PLLP
490 N. 31st Street, Suite 500
P.O. Box 2529
Billings, MT 59103-2529

Lynne J. Boomgaarden
Crowley Fleck, PLLP
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009



Anthony T. Wendtland

7698187_5

IN THE DISTRICT COURT, FOURTH JUDICIAL DISTRICT, IN AND FOR SHERIDAN COUNTY, WYOMING

BROOK MINING COMPANY, LLC, a Wyoming limited liability company, and RAMACO WYOMING COAL, LLC, a Wyoming limited liability company, Plaintiffs, vs. BIG HORN COAL COMPANY, a Wyoming corporation, Defendant.	Civil No. CV 2014-372

PLAINTIFFS' REPLY IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT AND IN RESPONSE TO DEFENDANT'S CROSS MOTION FOR SUMMARY JUDGMENT

INTRODUCTION

Big Horn Coal (BHC) has conceded that the plain language of the 1954 Deed reserves to Brook Mining Co., LLC and Ramaco Wyoming Coal, LLC (collectively Ramaco) a sweeping surface use right to mine coal. BHC has instead sidestepped the language in the 1954 Deed and attempted to use other agreements, common law, and statutes to attack Ramaco's rights. To the limited extent these arguments challenge Ramaco's arguments, they fail because: 1) they ignore and rewrite the plain language of the 1954 Deed; 2) they misread Section 5 of the May 6, 1983 Release Agreement (Release Agreement); 3) they allege disputed facts that are immaterial, undisputed, or unsupported; and 4) they rely on doctrines or statutes that do not apply. In truth, BHC's arguments have made the Court's task simple.[1]

[1] Ramaco has filed a Supplemental W.R.C.P. 56.1 Statement of Undisputed Facts with this Reply and Response Memorandum. Relevant additional facts will appear when needed.

ARGUMENT

I. BHC HAS CONCEDED THAT RAMACO HAS THE RIGHT TO USE THE SURFACE COVERED BY THE 1954 DEED AS IS NECESSARY OR CONVENIENT TO OPERATE ITS COAL MINE.

BHC has conceded that the plain language of the 1954 Deed grants Ramaco the right "to use as much of the surface of said lands as may be necessary or convenient in order to mine, explore, drill, extract and remove said oil, gas, coal and other minerals." *See Leeks Canyon Ranch, LLC v. Callahan River Ranch, LLC*, 2014 WY 62, ¶ 14, 327 P.3d 732, 738 (Wyo. 2014) (Pl.'s Mem. in Supp. of its Mot. for Summ. J., 6-9.) Likewise, BHC has conceded that this gives Ramaco the right to use the surface of BHC's land. (Id.)

Although this should end the case, BHC argues that the Release Agreement gives it a superior right to use the surface and limits Ramaco's rights. (Def.'s Br. in Supp. of Mot. for Summ. J., 4.) That is not true. The land covered by the Release Agreement does not overlap with all of the land covered by the 1954 Deed. (*See* the attached July 6, 2015 Supplemental Affidavit of Jeff Barron, P.E. at Exs. O, P, Q, and M2.) This means that BHC has no argument for those lands that do not overlap and leaves the Court to compare only the land covered by both the 1954 Deed and Schedule D of the Release Agreement. For all remaining land in the 1954 Deed, the Court should enter summary judgment for Ramaco. *Davison v. Wyo. Game & Fish Com'n*, 2010 WY 121, ¶ 35, 238 P.3d 556, 567 (Wyo. 2010). But even for the lands that do overlap, Ramaco has always had the reserved dominant right to use the surface as is "necessary or convenient" to mine its coal there.

II. THE RELEASE AGREEMENT DOES NOT CHANGE RAMACO'S SURFACE USE RIGHTS UNDER THE 1954 DEED.

BHC's argument that the Release Agreement gave it a superior surface use right incorrectly assumes that the agreement conveyed or granted some property interest to BHC that diminishes Ramaco's rights expressly reserved in the 1954 Deed. BHC's assumption is wrong. The Release Agreement only did what its name suggests; it released BHC's leased coal back to Sheridan-Wyoming Coal (SWC). After the Release Agreement, the same set of interests that existed before the agreement remained. BHC owned the surface of the lands covered by the 1954 Deed, and SWC owned the minerals and the broad perpetual right to use the surface to mine those minerals.

A summary of the Release Agreement proves this. From 1954 through 1979, SWC leased some of its coal to BHC. The corresponding leases granted BHC the: "right and privilege to mine and dispose of all of the coal which can be economically mined by strip mining methods, (hereinafter called "leased coal"), lying in, upon or under the following described lands . . .." (Barron Aff., Ex. F at pages "Other Legal 8, 13, 15-16, 18 and 21). BHC could access that coal because it purchased the surface subject to SWC's rights reserved in the 1954 Deed. But BHC never owned any mineral rights in the property.

Because BHC did not own the coal, it eventually had to surrender its leased interest. That occurred with the 1983 Release Agreement. That agreement stated that BHC would release to SWC "all right, title, interest, claim and demand in and to the Leases [Schedule A leased coal and surface] insofar as they cover certain coal ("Released Coal") situate in Sheridan County, Wyoming and more particularly described in Schedule "B" attached hereto and by this reference incorporated

herein." (Barron Aff., Ex. F at 237.) Even though BHC agreed to release its leased interests, it promised to complete its reclamation obligations within 18 months.[2] (*Id.*)

Besides releasing the coal, BHC also received SWC's consent to use certain lands to maintain some structures and stockpiles. (*Id.* at 238.) SWC agreed in Section 5 of the Release Agreement that:

> Lessor expressly consents and agrees to allow Lessee to leave intact any and all permanent structures, stockpiles, or spoil materials (referred to herein collectively as "structures and stockpiles") currently located in Sections 9, 10, 14, 15, 21, and the N1/2 of Section 22 of T. 57N., R. 84 W., 6th P.M., as more specifically identified in Schedule D attached hereto. . . . In addition, Lessee agrees to move any structures or stockpiles, including the relocation of Wyoming State Highway 338, as necessary, at its sole cost and expense, at such time as the Lessor, or its successors in interest, presents to Lessee a mine plan approved by all applicable governmental agencies to mine coal in either Section 22 or 27. If the Lessor makes application for approval of a plan to mine any of the coal in the pertinent portions of these two sections, its application shall in no way be prejudiced by the existence of any structures or stockpiles or the location of State Highway 338 in these sections. Lessee will not oppose any such mine plan before a governmental agency and will take no action, direct or indirect, to induce any federal, state, or local agency to disapprove or otherwise object to such mine plan. If approval is conditioned upon Lessee's consent to remove or relocate any structures or stockpiles, Lessee shall not withhold such consent. Lessor reserves the right to seek specific performance of this obligation in addition to any and all remedies available to Lessor including all remedies provided under the Road Relocation Agreement.

(*Id.*) The referenced Schedule D states that it "identifies that property upon which Big Horn Coal Company has placed or will place permanent structures or stockpiles" and then describes the applicable land. (*Id.* at 250.)

---

[2] BHC also agreed to release one mine pit (Pit 5) to Peter Kiewit Sons' Co. But that release and Peter Kiewit Sons' Co. are irrelevant to this case.

Nothing in the Release Agreement or in Section 5 conveyed any ownership interest to BHC or stated that BHC had an exclusive or superior surface use right over the 1954 Deed. So the question becomes how could Section 5 and Schedule D give BHC a superior surface use right over the 1954 Deed? The answer is simple; it does not—BHC and SWC said so.

A. The parties did not intend Section 5 to diminish or conflict with Ramaco's rights under the 1954 Deed.

Had the parties intended Section 5 or Schedule D to change the reserved rights in the 1954 Deed, they had to say so. *Id.* ¶ 20, 317 P.3d at 1132. They did not. And the Court cannot infer intent from language that does not exist. The Court can, however, look to the parties' surrounding circumstances to understand what the plain language would "convey to reasonable persons at the time and place of its use." *Leeks Canyon Ranch, LLC*, ¶ 14, 327 P.3d at 738 (citations omitted). Here, the surrounding circumstances show that the parties explicitly crafted Section 5 so it did not conflict with the rights in the 1954 Deed.

As part of negotiating the Release Agreement, the attorneys for SWC sent a letter to BHC that addressed BHC's proposed language for Section 5. Initially, BHC had proposed that Section 5 include language that the rights in Section 5 shall "not be impaired by any rights reserved by Lessor in that certain warranty deed to Big Horn Coal Company dated June 28, 1954." (Barron Supp. Aff., Ex. S at page 1). But SWC rejected this language and similar language in Section 2 because it was "concerned that the provisions might be construed to limit the Lessor's reserved right, contained in the June 28, 1954 Warranty Deed" to use the surface as is necessary or convenient. (*Id.* at 2.)

Instead of these terms, SWC proposed the Section 5 that appears in the Release Agreement. (*Id.* at 3.) SWC's letter explained that it suggested these changes because it wanted to "accommodate Big Horn's surface use, and at the same time **not reduce** any of the rights reserved to SWCC in their warranty deed of June 28, 1954." (*Id.* at 4.) BHC then agreed to the changes and accepted Section 5 as it appears in the final Release Agreement. In other words, the parties had contemplated using Section 5 to limit the rights granted in the 1954 Deed—but rejected it in the final plain language of their Release Agreement.

BHC may claim that the letter is parol evidence; but that is not so. Surrounding circumstances include "commercial or other settings in which the contract was **negotiated** and other objectively determinable factors that give rise to the transaction between the parties." *Miner v. Jesse & Grace, LLC*, 2014 WY 17, ¶ 29, 317 P.3d 1124, 1134-35 (Wyo. 2014). Parol evidence, however, relates to collateral agreements that may contradict terms in an agreement. *Id.* The letter accurately provides context and shows the parties' negotiations and a mutual decision not to do what BHC now argues. The plain language of Section 5 bears this out.

B. The parties intended Section 5 to help BHC's now completed reclamation and mining efforts.

Similar to the letter that SWC sent to BHC about Section 5, BHC also stated the reasons that it wanted to use the land described in Section 5 and Schedule D. In an internal memo dated December 10, 1982, BHC explained how it wanted to use that land to stockpile overburden (dirt removed to expose the coal seam). (Barron Supp. Aff., Ex. T at pages 1-2). And, as set out in the plain language of the Release Agreement, SWC agreed to allow BHC to do that.

When SWC agreed to allow the surface used for stockpiling overburden, it did not, however, create any new perpetual superior surface use right. In fact, it could not do so. Every mine has to reclaim open surface pits. Wyo. Stat. Ann. § 35-11-406(b). The stored overburden is

used to do this. BHC even said so, noting that for several sections its current plan called "for the rehandle of all of this material back into Pit 5 to satisfy the State." (*Id.* at page 2.) For another section, BHC said it would reclaim that stockpile area in 1987 because of on-going activities in Pit 3. (*Id.*)

Section 6 of the Release Agreement confirms the parties' intent in this regard. That section required BHC to continue with its "abandonment, reclamation, and related procedures required by applicable law...." It also acknowledged that BHC could not complete reclamation on Pit 3 until 1987 and agreed to that timetable. In other words, Section 6 allowed BHC to reclaim using the overburden stored on the lands described in Section 5. Reading Sections 5 and 6 together fairly and in context confirms the parties did not intend Section 5 to create a perpetual, superior right. *Arnold v. Ommen,* 2009 WY 24, ¶ 40, 201 P.3d 1127, 1138 (Wyo. 2009) (stating that courts interpret contracts as a whole).

The remainder of Section 5 also bears out this conclusion. In the latter part of Section 5, BHC agreed that if SWC or "its successors in interest," presented a plan to mine coal in sections 22 and 27 (which are covered by the 1954 Deed), then BHC shall move its "structures or stockpiles" or the old Highway 338 at its sole expense. (Barron Aff., Ex. F at 237). BHC also agreed that if SWC or its successors presented a mine plan for those sections, it would not oppose that plan or take any action to cause a regulatory agency to disapprove or object to the coal mine plan. (*Id.*) Contrary to BHC's recast of Section 5 and its history, the parties intended the Release Agreement to allow BHC to complete its mining and reclamation efforts and allow SWC or one of its successors to build a coal mine on these lands.

BHC, however, tries to evade its original intent by claiming that the "or will place" preface to the Schedule D land description gives it a perpetual, superior right. This ignores the surrounding circumstances discussed above. The "will place" language can only refer to overburden that BHC planned to move around as it completed certain mining activities and reclamation. BHC said so, explaining that the Pit 3 expansion and Pit 1 S.E.X. would require it to place overburden on these lands. (Barron Supp. Aff., Ex. S at pages 1-2). Eventually, BHC did just that and removed the overburden to complete reclamation. In context, the "will place" language did not refer to yet unknown, indefinite future projects.

To read Schedule D as BHC alleges would force it to conflict with the language of Section 5. Although Schedule D says that it covers property "upon which Big Horn Coal Company has placed or will place" structures, Section 5 states that it covers all "currently located" structures on the lands identified in Schedule D. (Barron Aff., Ex. F at 237). BHC's reading of Schedule D means it refers to any future project. A similar reading of Section 5 would mean it refers to just the present. Wyoming law prohibits interpreting a contract to produce this inconsistent result. *Star Valley Ranch Ass'n v. Daley*, 2014 WY 116, ¶ 23, 3345 P.3d 1207, 1213 (Wyo. 2014). But the Court can avoid that result by using the undisputed evidence of the parties' surrounding circumstances. As explained above, that shows the "currently located" and "will place" language referred to the presently planned, but not yet executed overburden placements. Only that reading makes the two terms consistent in context, practice and with Wyoming law.

C. The Release Agreement is irrelevant.

Regardless of the undisputed history, which shows that the parties did not intend for Section 5 or Schedule D to change the rights in the 1954 Deed, that section and the Release Agreement have become moot. BHC has reclaimed its active mines and had its reclamation bonds released. (Barron Aff. at pages 4-5, ¶ 7 and pages 9-10, ¶¶ 17-18 and attached Exs. G and H and Barron Supp. Aff. at page 3, last para. of ¶ 4 and Ex. K4.) In compliance with the Release Agreement, it has removed the overburden from the land described in the Section 5 and Schedule D. (*Id.* at 4-5, 9-10.) Only the shop, bridge, and the north part of an abandoned rail siding (located in the N1/2 of Section 22) remain from the structures that were intact and that "currently exist[ed]" on the Schedule D lands at the time of the execution of the Release Agreement. (Barron Aff. at pages 4-5, ¶ 7 and pages 9-10, ¶¶ 17-18 and attached Exhibits G and H.) Ramaco will not touch the shop or bridge. (Barron Supp. Aff. at pages 2-4, ¶¶ 4-5 and Exs. I, I1, J, K1, K2, K3, K4 and L.) Thus, even if stockpiles or structures encumbered Ramaco's surface rights thirty years ago, the undisputed facts show no such encumbrance today. In short, Section 5 and Schedule D mean nothing to this case.

III. NO GENUINE ISSUES OF MATERIAL FACT EXIST.

Throughout its brief, BHC alleges that disputed material facts preclude summary judgment. To create a genuine issue of material fact, Rule 56 demands affidavits with specific facts showing a genuine dispute. Wyo. R. Civ. P. 56(e). But the facts in BHC's motion are immaterial, undisputed, or unsupported. They do not preclude summary judgment.

A. Ramaco's mine plan changes do not present a question of material fact.

BHC makes much from differences between Ramaco's initial mine plan and its current mine plan. (Def.'s Br. in Supp. of Mot. for Summ. J., 6-8.) But that means nothing in this case. As is normal for permitting a complex mining operation, Ramaco has amended its proposed mine plan. As BHC knows from its previous mining operations, mine plans can change. The permitting process is no different. During that process, the Department of Environmental Quality's Land Quality Division returns comments and questions about a company's permit application. The company can then clarify or change its plans to complete the permit process.

That is what occurred here. After Ramaco submitted its initial mine plan, the Land Quality Division returned comments, questions, and requests for information. (Jeff Barron Supp. Aff. at pages 1-4, ¶¶ 2-5 and Exs I, I1, J, K1, K2, K3, K4 and L). In response, Ramaco clarified its plans for the lands adjacent to those described in the 1954 Deed, the bridge across the Tongue River, and BHC's shop. (*Id.*)

Although BHC ascribes a nefarious motive to the changes in Ramaco's mine plan, BHC's motion proves otherwise. BHC explains that Ramaco's current plan will:

- not use the surface of BHC's land to transport coal mined from adjacent lands;
- not use BHC's road across the Tongue River; and
- not use BHC's existing shop.

(Def.'s Br. in Supp. of Mot. for Summ. J., 6-8.) BHC is right. Ramaco does not intend any of those things—which works to BHC's benefit. (Jeff Barron Supp. Aff. at pages 1-4, ¶¶ 2-5 and Exs I, I1, J, K1, K2, K3, K4 and L). But that does not make the facts disputed. It just means that the facts have changed since Ramaco submitted its initial mine plan in October 2014. (*Id.*) Given that only Ramaco can speak to its intent, BHC has failed to create a genuine issue of fact.

B. BHC's other alleged disputed facts rely on unsupported or inadmissible evidence.

BHC alleges that four other questions of material fact preclude summary judgment. (Def.'s Br. in Supp. of Mot. for Summ. J., 13-16.) To create a genuine dispute of fact, BHC must provide affidavits or other admissible evidence. Wyo. R. Civ. P. 56(e). BHC cannot rely on "mere allegations or denials"; otherwise, the Court should enter summary judgment for Ramaco. *Id.* Yet BHC's so-called disputed facts rely on just allegations and denials.

BHC first argues that the 1954 Deed did not contemplate the type of mining in Ramaco's mine plan. (Def.'s Br. in Supp. of Mot. for Summ. J., 13-14.)[3] BHC, however, has no affidavits or documents to support this claim. None of the materials with BHC's motion even speak to the historical mining methods that existed when the parties executed the 1954 Deed. A self-serving allegation does not create an issue of material fact. *See Jacobs Ranch Coal Co. v. Thunder Basin Coal Co.*, 2008 WY 101, ¶ 17, 191 P.3d 125, 131 (Wyo. 2008).

Only Ramaco has provided the Court with admissible evidence on this subject. Jeff Barron's affidavit explains that surface mining, including highwall mining, was the prevalent mining method in 1954. (Barron Aff. at pages 6-8, attached Exs. E and F.) In fact, the surface mining methods used in 1954 involved more surface disturbance and subsidence than Ramaco's proposed mining method. (*Id.* at 6-10.) So if the parties contemplated a more intrusive surface mining method, that would allow a less intrusive method, too. Absent admissible evidence to contradict Mr. Barron's affidavit, no genuine dispute of material fact exists.

---

[3] BHC relies on one case to claim that the Court should consider whether the parties considered highwall mining. *See Phipps v. Leftwich*, 222 S.E.536 (Va. 1976). That case, however, conflicts with Wyoming law because it looked beyond the four corners of the parties' contract without any legal justification. In fact, the Federal Court of Claims criticized *Phipps* because it conflicted with Virginia's own case law and rejected using *Phipps* as a way to interpret a contract. *Richmond, Fredericksburg and Potomac Railroad Co. v. U.S*, 27 F.Cl. 275, 289 and n.11 (1992).

Even if BHC had evidence that showed a different history, a dispute of fact would still not exist. Whether BHC and SWC contemplated highwall mining is an interpretation question not a fact question. To that end, BHC had to show that the 1954 Deed precluded yet undefined mining methods that limited future mining efforts to only underground mining or non-highwall surface mining. BHC, however, does not point to any such limitation—because it does not exist. The 1954 Deed does not limit the nature, character, scope, or method that Ramaco may employ to mine coal. Instead, it allowed Ramaco to access and remove coal and other minerals from these lands using as much of the surface as may be "necessary or convenient" with no qualifiers. *See Hazard Coal Corp. v. Knight,* 325 S.W.3d 290, 297-301 (Ky. 2010) (enforcing broad surface use language in a severance deed that included "necessary or convenient" language granting rights of way for mining).

BHC next argues that highwall mining in Section 22 is not necessary or convenient because of current geology. (Def.'s Br. in Supp. of Mot. for Summ. J., 14-15.) Again BHC provides no supporting evidence or affidavits, relying instead on speculation and conjecture. And even if it had, this is not a material fact because it does not establish or refute an essential element of a claim or defense. *Glenn v. Union Pacific R.R. Co.*, 2008 WY 16, ¶ 6, 176 P.3d 640, 642 (Wyo. 2008). Here, the Court must decide only whether Ramaco has a right to use BHC's surface to mine and whether Ramaco's mine plan matches Ramaco's surface use rights. BHC's speculation about the geology of Section 22 answers neither question.

BHC then generalizes its previous arguments about changes to Ramaco's mine plan and asserts that facts exist as to the location and extent of Ramaco's mining. (Def.'s Br. in Supp. of Mot. for Summ. J., 15-16.) As explained above, Ramaco's amended mine plan is not in dispute; the plan has simply changed to reflect comments and planning adjustments natural to the permit process.

Finally, BHC argues that Ramaco's mine will interfere with BHC's "proposed mining of the State lease." (*Id.* at 15.) Like each of the other alleged disputed facts, BHC offers no supporting affidavits or admissible evidence. BHC's failure is glaring. If BHC truly intended to mine the State lease, it should be able to produce an existing, approved mine plan, permit, or some formal proposal submitted to the appropriate agency. And even if BHC produced some document, it would prove a non-material fact. BHC has not asked the Court to declare its surface use rights to mine relative to Ramaco's surface use rights to mine. BHC has also not explained how its alleged future, undefined mining plans on unrelated property would supersede Ramaco's rights to use the surface of the property in this case. So it would not prove an essential element of a claim or defense. *See Glenn*, ¶ 6, 176 P.3d at 642.

IV. THE ACCOMMODATION DOCTRINE DOES NOT APPLY.

Even though Ramaco preempted BHC's arguments about the Accommodation Doctrine, BHC persists that the doctrine limits Ramaco's use of the surface. (Def.'s Br. in Supp. of Mot. for Summ. J., 17-18.) But BHC has conceded two points of law that defeat this claim.

BHC first conceded that common law does not apply when parties have a written contract. *See Wyo. Johnson Inc. v. Stag Indus.*, 662 P.2d 96, 101 (Wyo. 1983). Instead, the contract controls the parties' rights and obligations and "pre-empts" the common law. *Id.* Here, the 1954 Deed granted Ramaco greater rights than the Accommodation Doctrine. So the 1954 Deed controls.

BHC also conceded that applying the Accommodation Doctrine violates key contract law principles. Using the Accommodation Doctrine would rewrite the terms of the 1954 Deed and eliminate the phrase "necessary or convenient." (Pl.'s Mem. in Supp. of its Mot. for Summ. J., 14-15.) But Wyoming law rejects rewriting contracts "under the guise of interpretation." *Comet Energy Services, LLC v. Powder River Oil & Gas Ventures, LLC*, 2008 WY 69 ¶ 11, 185 P.3d 1259, 1263 (Wyo. 2008). It also rejects making contract provisions meaningless. *Herling v. Wyoming Machinery Co.*, 2013 WY 82, ¶ 52, 304 P.3d 951, 964 (Wyo. 2013). So it would reject a doctrine that does both.

Attempting to skirt this law, BHC now claims that the 1954 Deed's "necessary or convenient" language and the Accommodation Doctrine's "reasonably necessary" language mean the same thing. (Def.'s Br. in Supp. of Mot. for Summ. J., 17-18.) But different words mean different things. In fact, they must under Wyoming law. *Herling*, ¶ 52, 304 P.3d at 964 (Courts presume that each provision has a purpose and "avoid constructions which would render a provision meaningless."). Here, they do. The 1954 Deed grants Ramaco the right to use the surface as is "necessary or convenient." Necessary means an action that someone must take; but convenient means an action that someone can take to afford an advantage. (Pl.'s Mem. in Supp. of its Mot. for Summ. J., 7.) It is the difference between may and must; and Ramaco can choose one or both. The Accommodation Doctrine, however, would limit Ramaco's choice to only "reasonably necessary" actions. In other words, it would cut out half of Ramaco's rights under the Deed and limit the remaining half. No reasonable reading of the 1954 Deed and the Accommodation Doctrine supports BHC's argument.

BHC also claims the Court should read the 1954 Deed using a "custom and usage" concept because "necessary or convenient" is a technical phrase. (Def.'s Br. in Supp. of Mot. for Summ. J., 12-13) But BHC does not explain why the terms are technical. BHC also does not present any evidence to suggest this. Even if BHC had, it would be incorrect. The phrase uses common terms that have no special meaning in a deed or in coal mining. And under Wyoming law, the Court should just apply the plain meaning of each word. *Leeks Canyon Ranch, LLC*, ¶ 14, 327 P.3d at 738.

V. BHC'S DAMAGES ARGUMENTS ARE IRRELEVANT.

Ramaco has asked the Court to declare its right to use the surface of BHC's land not what, if any, damages it might pay BHC under the 1994 Deed. (Pl.'s Mem. in Supp. of its Mot. for Summ. J., 18-19.) Anticipating that BHC would inject a new issue, Ramaco responded to BHC's one-line affirmative defenses that "the damage provisions in the 1954 Deed are unconscionable" and that "§ 35-11-406 preempts the damages limitation in the 1954 Deed" to show they did not apply. (*Id.* at 9-13, 15-18.) But those issues are now moot. BHC's motion for summary judgment stated that "the issue of unconscionability is not before the Court." (Def.'s Br. in Supp. of Mot. for Summ. J., 16.) Likewise, BHC's motion said nothing about § 35-11-406.

BHC's respective concession and silence should have ended debate about damages—but apparently did not. BHC has requested that the Court rule: "(4) EQA's provisions regarding damages control over the damages limitations in the 1954 Deed, and (5) the damages provisions in the 1954 Deed do not apply to non-agricultural land." (*Id.* at 19.) The Court, however, need not and should not consider either request for two reasons.

A. BHC has not plead any claims that entitle it to relief on the scope of damages.

Rule 8 requires an original claim or a counterclaim to have: (1) a short, plain statement of the Court's jurisdiction; (2) a short, plain statement of why the pleader is entitled to relief; and (3) a demand for judgment for the requested relief. Wyo. R. Civ. P. 8(a). Here, BHC never filed a counterclaim or any request for relief. If BHC wanted the Court to declare whether the 1954 Deed or Wyoming's Environmental Quality Act controlled, it should have been pled. Ramaco's Complaint, standing alone, did not entitle BHC to request any declaratory relief tangential to Ramaco's request. Because BHC failed to plead any claim for declaratory relief, the Court can and should ignore BHC's requests. *Campbell County Memorial Hosp. v. Pfeifle*, 2014 WY 3, ¶ 31, 317 P.3d 573, 581 n.4 (Wyo. 2014).

To do otherwise would prejudice Ramaco. Although Ramaco can respond to BHC's arguments now, Ramaco has lost its procedural rights for what has allegedly become BHC's counterclaim. Without a pleading describing BHC's claim for relief, Ramaco cannot answer or move to dismiss. *See* Wyo. R. Civ. P. 12(a). Here, that lost opportunity matters because no justiciable controversy exists about damages, depriving the Court of jurisdiction and preventing BHC from stating a viable claim. Still, the Court can use it as a reason to reject BHC's summary judgment motion.

B. No justiciable controversy exists about the scope of damages.

The Declaratory Judgment Act requires that for a court to declare someone's rights the plaintiff or counterclaimant must be an "interested" person. Wyo. Stat. Ann. § 1-37-103. The Wyoming Supreme Court has found that the interest requirement "captures" the doctrine of justiciability, including the concept of ripeness. *International Ass'n of Firefighters Local Union No. 279 v. Cheyenne*, 2013 WY 157, ¶ 21, 316 P.3d 1162, 1169 (Wyo. 2013). A claim is not ripe,

and not justiciable, if it "rests upon contingent future events that may not occur as anticipated, or indeed may not occur at all." *Mountain Regional Services, Inc. State ex rel. Dept. of Health*, 2014 WY 69, ¶ 14, 326 P.3d 182, 185-86 (Wyo. 2014).

This phrase describes BHC's requested relief perfectly. No one knows when or if Ramaco will ever damage any of BHC's surface improvements. Ramaco is still developing, planning, and permitting its mine. Until that process ends, no surface disturbance or mining will occur. Until DEQ approves Ramaco's mine plan, no one can even estimate potential damages. At this point, the Court can only speculate what damage could occur, preventing any judgment from effectively operating. *Reiman Corp v. City of Cheyenne*, 838 P.2d 1182, 1187 (Wyo. 1992) (explaining that declaratory relief must effectively operate and have a practical effect on the parties).

Even the section of the Environmental Quality Act that BHC cites shows the issue is not ripe. Section 35-11-416 sets damages based on how mining operations affect the land and surface improvements. Hence, the Act requires a party to get a permit before posting a bond because the amount of the bond depends upon the scope of approved mining operations. But until Ramaco gets a permit to mine, no one can calculate a bond amount. Until that occurs, this Court has no jurisdiction to consider BHC's request. *White v. Board of Land Cmm'rs*, 595 P.2d 76, 79 (Wyo. 1979).

CONCLUSION

Even after BHC's motion for summary judgment, the case remains about whether Ramaco has the right under the 1954 Deed to use the surface as is "necessary or convenient" to mine coal. BHC has largely conceded this point, but tried to reinterpret the Release Agreement and common law doctrines to confuse the Court. Neither approach changes the result. The parties crafted the Release Agreement to work with and subject to the 1954 Deed—not to change it. And the common

crafted the Release Agreement to work with and subject to the 1954 Deed—not to change it. And the common law doctrines do not apply. So the Court should declare that: 1) Ramaco owns the rights under the 1954 Deed; and, 2) those rights allow Ramaco to use BHC's surface to conduct all "necessary or convenient" coal mining activities, including designing, planning, permitting, building, and using surface structures for coal mining; and 3) the Brook Mine Plan application contains permitted uses of the surface under the 1954 Deed.

Dated this 6th day of July, 2015.

Anthony T. Wendtland – WSB No. 05-2468
Wendtland & Wendtland, LLP
Attorney for Plaintiffs
2161 Coffeen Ave., Suite 301
Sheridan, WY 82801
Telephone: 307.673.4696 / Fax: 307.673.4828

Thomas L. Sansonetti – WSB No. 05-1546
Isaac Sutphin – WSB No. 06-3711
Jeffrey S. Pope – WSB No. 07-4859
Holland & Hart, LLP
Attorneys for Plaintiffs
2515 Warren Avenue
Cheyenne, WY 82001
Telephone: 307.778.4200 / Fax: 307.778.8175

CERTIFICATE OF SERVICE

I, Anthony T. Wendtland, certify that on the 6th day of July 2015, a true and correct copy of the foregoing Plaintiffs' Memorandum in Support of Plaintiffs' Motion for Summary Judgment was placed in the United States Mail, first class, postage pre-paid and addressed to the following:

Jon T. Dyre
Crowley Fleck, PLLP
490 N. 31st Street, Suite 500
P.O. Box 2529
Billings, MT 59103-2529

Lynne J. Boomgaarden
Crowley Fleck, PLLP
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009

Anthony T. Wendtland

7872879_3

The Applicant's position with regard to any surface interests that may be claimed by Padlock Ranch Company and/or Big Horn Coal Company is that the Applicant alone owns the sole dominant present property right to use these surface lands for the coal mining operation described in the application, as that application has been submitted and supplemented. Applicant's sole dominant surface ownership and use interest in the relevant lands derives directly from the 1954 Deed (Attachment B) and its express reservation language. Pursuant to the controlling Wyoming Supreme Court authority set out in *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986) (Attachment C), when the Applicant already owns the dominant surface use rights for coal mining on the property, then the Applicant consents to its own use pursuant to its application by submitting the application and no other surface consents can or should be required under W.S. § 35-11-406(b)(xi). As the Land Quality Division is aware, to the extent that Padlock Ranch Company incorrectly claims some surface rights on any lands described in the 1954 Deed, it necessarily could only attempt to do so fully subject to the Applicant's sole dominant surface rights to mine coal. Under the WYOMO Fuels, Inc. decision, no consent from Padlock can be required. To the extent that Big Horn Coal incorrectly claims some surface use right in this area at this time, the Applicant is proceeding with quiet title litigation (Fourth Judicial District Court, Sheridan County, Wyoming Civil No. CV 2014-372) against Big Horn Coal on this issue and has asserted its sole dominant reserved surface right to use the surface described in the 1954 Deed to mine coal there without any consent from Big Horn Coal pursuant to the WYMO Fuels, Inc. case decision. Accurate copies of the Applicant's pending summary judgment motion arguments on this issue are enclosed with this response (attachment D and E). The Applicant can and will supplement these pleadings with further documentation that is described in the pleadings upon request.

RECORDED JULY 27, 1954, BK 98 PG 127
NO. 366196, B. B. HUME, COUNTY CLERK

WARRANTY DEED

THIS INDENTURE, made the 28th day of June, 1954, by and between the SHERIDAN-WYOMING COAL COMPANY, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having its principal place of business in the County of Sheridan, State of Wyoming, the GRANTOR, and BIG HORN COAL COMPANY, of the County of Sheridan, State of Wyoming, the GRANTEE, WITNESSETH:

That the grantor, for and in consideration of the sum of One Dollar and other good and valuable consideration, in hand paid, the receipt whereof is hereby acknowledged, does, by these presents, grant, bargain, sell, CONVEY AND WARRANT unto the said grantee, all of the surface rights in the following, in the County of Sheridan, State of Wyoming:

Township 57 North, Range 84 West, 6th Principal Meridian

Sec. 3 SW¼SE¼, S½SW¼
Sec. 7 E½SE¼
Sec. 8 S½
Sec. 9 NE¼, SW¼NW¼, S½
Sec. 10 NE¼, SW¼, Undivided one-half interest in NW¼
Sec. 15 NE¼NE¼, W½NE¼, NW¼, W½SE¼, E½SE¼ south of Tongue River, the SW¼ excepting therefrom (i) the Acme townsite sold to Gothard Bylund in certain Agreement for Warranty Deed and Bill of Sale dated July 15, 1953, and (ii) certain tracts of land deeded to Montana-Dakota Utilities Company, described as follows: Beginning at a point 50 feet north 26° 54' 30" west of a point which is 1984.5 feet north 31° 23' east from the southwest corner; thence south 69° 6' west 100.51 feet; thence north 26° 54' 30" west 420.82 feet; thence north 24° 54' east 127.24 feet; thence south 86° 14' west 509.5 feet; thence south 26° 55' east 363.2 feet; thence south 69° 6' west 477.6 feet to the point of beginning.
Sec. 14 That part of SW¼SW¼ south of Tongue River
Sec. 17 All
Sec. 18 E½
Sec. 19 NE¼NE¼, All of SE¼NE¼ except the SW¼ thereof sold to William Long, also all that portion of NW¼NE¼ lying east of Tongue River
Sec. 20 NW¼, NW¼SW¼, All NE¼ north of C. B. & Q. Railroad Company right-of-way
Sec. 21 All except tracts and lots of Model Townsite owned by parties of record, and except that portion of SW¼NW¼ lying between the North line of the C. B. & Q. Railroad right-of-way and the North line of said SW¼NW¼, consisting of 4 acres, more or less, as conveyed to Bruno Romeo.
Sec. 22 All
Sec. 27 N½S½, and the N½, except a tract of land described as follows: Beginning 535.5 feet north 59° 30' east from the West Quarter corner of said Sec. 27; thence north 16° 12' east 200 feet; thence south 73° 48' east 200 feet; thence south 16° 12' west 200 feet; thence north 73° 48' west 200 feet to the point of beginning.
Sec. 28 NE¼, N½SE¼

Township 57 North, Range 85 West, 6th Principal Meridian

A certain tract of land in Sections 14 and 23 as described in Warranty Deed dated January 26, 1916 from George Masters to Peter Kooi, recorded in Book Z of Deeds, Page 214, County Clerk's Office

Together with all such surface water and ditch rights as Grantor may have in the foregoing;

But subject as to all of the foregoing to all existing grazing and other surface leases made by Grantor as Lessor, and the right of all tenants and lessees to remove buildings and other improvements placed on said leased premises by them;

And subject further, to one-half of the taxes for 1954 and all taxes for subsequent years;

And subject further, to all existing rights-of-way and easements in favor of third persons over and across the above described lands, including without limitation all streets and highways, County, State and Federal, and telephone and electric power transmission lines;

The Grantor reserving unto itself, its successors and assigns all gas, oil, coal and other minerals contained in all of the above described lands, together with the right to mine, explore, drill, extract and remove the same, and including the right to use so much of the surface of said lands as may be necessary or convenient in order to enable the Grantor, its successors and assigns to mine, explore, drill, extract and remove said oil, gas, coal and other minerals. And in the event that the Grantor, its successors or assigns, shall hereafter mine, drill, explore, extract and remove gas, oil, coal or other minerals and shall utilize any part of the surface of said lands in connection therewith, they shall be free from any liability or claim for damage to the surface of said lands that might be asserted by the Grantee, its successors and assigns, on account of subsidence or other injury to the surface of said lands resulting from such operations, except that in case of any such injury Grantor will pay such actual damage as the parties shall agree has been so caused to any said lands, or in default of such agreement, as shall be determined by arbitration to have been so caused; provided however, that in no event shall Grantor, its successors or assigns, be obliged to pay for such damage more than Ten Dollars ($10.00) per acre for any of said lands damaged which are dry grazing lands, Fifty Dollars ($50.00) per acre for any said lands damaged which are bottom lands, and Two Hundred Dollars ($200.00) per acre for any of said lands damaged which are irrigated lands.

IN WITNESS WHEREOF, the Grantor has caused its corporate seal to be hereunto affixed, and these presents to be signed by its duly authorized officer, the day and year first above written.

(SEAL)

ATTEST:

Assistant Secretary

SHERIDAN-WYOMING COAL COMPANY, Inc.

By _____

President

127

THE STATE OF WYOMING)
)SS
COUNTY OF SHERIDAN)

On this 28th day of June, 1954, before me personally appeared Walter J. Johnson to me personally known, who, being by me duly sworn did say that he is the President of SHERIDAN-WYOMING COAL COMPANY, Inc., and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors and said Walter J. Johnson acknowledged said instrument to be the free act and deed of said corporation.

My commission expires April 28th, 1956.
Given under my hand and notarial seal this 28th day of June, 1954.

Notary Public

From: Matt Kunze
To: Bj Kristiansen
Subject: Bear Lodge Rare Earth Mine Application
Date: Monday, July 13, 2015 10:11:32 AM

Hi Bj,

In your review request letter, you mentioned the permit application would also be electronic. Would you mind putting this on our server here, like you did for the Brook Mine files? Because of our move we are going to have limited access to the hard copy files for a period of time, but we are not sure when exactly.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	Bj Kristiansen; David Myers; David Schellinger; Craig Hults; Doug Emme; Matt Kunze; Muthu Kuchanur; Stacy Page; Jamie O"Dell; Kim Medina
Subject:	Brook Mine Second Round Technical Review
Date:	Wednesday, July 15, 2015 9:51:48 AM
Attachments:	Rd 2 Tech Review Request.doc

Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.

Thanks,

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Dave Myers
Dave Schellinger
Craig Hults (for Deanna Hill)
Doug Emme
Matt Kunze
Muthu Kuchanur
Jamie Jakes
Kim Medina
Stacy Page
BJ Kristiansen

FROM: Mark Rogaczewski, Supervisor, District 3

DATE: July 15, 2015

SUBJECT: Request for Second Round Technical Review – Brook Mining, LLC, Brook Mine Coal Mine Application, TFN 6 2/025

Western Water Consultants, on behalf of Brook Mining, LLC, has submitted the round one technical review comment responses for the Brook Mine coal mine permit application. These materials arrived in the LQD D3 office on July 10, 2015. The 30 day statutory review deadline is August 9, 2015. The application coordinator, BJ Kristiansen, is currently out of the office on vacation. I am sending this request for review on his behalf to initiate reviews as quickly and efficiently as possible to maximize time available under the 30 day statutory review deadline.

Materials containing the round one technical review comment responses are on the LQD library shelves in binders labelled Brook Mine Permit Application, July 2015. I request your round two technical review assistance of these materials by August 4, 2015. If you have scheduling conflicts or concerns please contact BJ or I.

/mr

cc. Cheyenne LQD File

From: Matt Kunze
To: Jennifer Mickle; Tammi Pusheck
Subject: Re: Brook Mine Second Round Technical Review
Date: Wednesday, July 15, 2015 11:02:14 AM

Jen and Tammy...once this arrives from District 3 could you please let Muthu and I know? Thanks...we have a short turnaround time to review.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>
> Thanks,
>
> Mark Rogaczewski
> Supervisor
> LQD District III
> 2100 West 5th Street
> Sheridan, WY 82801
> 307-675-5616
> mark.rogaczewski@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matt Kunze
To:	Mark Rogaczewski
Cc:	Bj Kristiansen; David Myers; David Schellinger; Craig Hults; Doug Emme; Muthu Kuchanur; Stacy Page; Kim Medina; Jaime Jakes
Subject:	Re: Brook Mine Second Round Technical Review
Date:	Wednesday, July 15, 2015 11:05:40 AM

Mark, was there an electronic copy of the responses and new materials sent? If so Muthu and I would be interested in getting them to help us in the review.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>
> Thanks,
>
> Mark Rogaczewski
> Supervisor
> LQD District III
> 2100 West 5th Street
> Sheridan, WY 82801
> 307-675-5616
> mark.rogaczewski@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	Matt Kunze
Cc:	Bj Kristiansen; David Myers; David Schellinger; Craig Hults; Doug Emme; Muthu Kuchanur; Stacy Page; Kim Medina; Jaime Jakes
Subject:	Re: Brook Mine Second Round Technical Review
Date:	Wednesday, July 15, 2015 11:13:12 AM

Matt,

LQD D3 has not located an electronic copy of the materials. D3 has the five hard copy binders containing the comment response materials and are trying to arrange a drop-off with Cheyenne staff via normal travel. We have no travel schedule in the next week or so that could accomplish this drop-off. If Muthu and your schedules are tight to complete this review, I can have Pat send down the hard copies.

Thanks,
Mark

On Wed, Jul 15, 2015 at 11:05 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:

> Mark, was there an electronic copy of the responses and new materials sent? If so Muthu and I would be interested in getting them to help us in the review.
>
> Thanks, Matt
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>>
>> Thanks,
>>
>> Mark Rogaczewski
>> Supervisor
>> LQD District III
>> 2100 West 5th Street
>> Sheridan, WY 82801
>> 307-675-5616
>> mark.rogaczewski@wyo.gov

> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matt Kunze
To:	Mark Rogaczewski
Cc:	Bj Kristiansen; David Myers; David Schellinger; Craig Hults; Doug Emme; Muthu Kuchanur; Stacy Page; Kim Medina; Jaime Jakes
Subject:	Re: Brook Mine Second Round Technical Review
Date:	Wednesday, July 15, 2015 11:20:12 AM

Mark,

Yes please have them sent down. Muthu is going to be gone for a week and we have a large number of comment responses to review. If an electronic copy does arrive please let us know.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 11:13 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Matt,
>
> LQD D3 has not located an electronic copy of the materials. D3 has the five hard copy binders containing the comment response materials and are trying to arrange a drop-off with Cheyenne staff via normal travel. We have no travel schedule in the next week or so that could accomplish this drop-off. If Muthu and your schedules are tight to complete this review, I can have Pat send down the hard copies.
>
> Thanks,
> Mark
>
> On Wed, Jul 15, 2015 at 11:05 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Mark, was there an electronic copy of the responses and new materials sent? If so Muthu and I would be interested in getting them to help us in the review.
>>
>> Thanks, Matt
>>
>> ---
>>
>> Matt Kunze
>> Surface Water Hydrologist, Division Services
>> Wyoming Department of Environmental Quality, Land Quality Division
>> 122 West 25th Street
>> Herschler Building 3W
>> Cheyenne, WY 82002
>> 307-777-7055

On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>
> Thanks,
>
> Mark Rogaczewski
> Supervisor
> LQD District III
> 2100 West 5th Street
> Sheridan, WY 82801
> 307-675-5616
> mark.rogaczewski@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Pat Seurer
Subject: Fwd: Brook Mine Second Round Technical Review
Date: Wednesday, July 15, 2015 11:25:41 AM

Per Matt Kunze's request, please send the Brook Mine comment response materials to Cheyenne as soon as possible.

Thanks,

Mark
---------- Forwarded message ----------
From: **Matt Kunze** <matthew.kunze@wyo.gov>
Date: Wed, Jul 15, 2015 at 11:20 AM
Subject: Re: Brook Mine Second Round Technical Review
To: Mark Rogaczewski <mark.rogaczewski@wyo.gov>
Cc: Bj Kristiansen <bj.kristiansen@wyo.gov>, David Myers <david.myers@wyo.gov>, David Schellinger <david.schellinger@wyo.gov>, Craig Hults <craig.hults@wyo.gov>, Doug Emme <doug.emme@wyo.gov>, Muthu Kuchanur <muthu.kuchanur@wyo.gov>, Stacy Page <stacy.page@wyo.gov>, Kim Medina <kim.medina@wyo.gov>, Jaime Jakes <jaime.jakes@wyo.gov>

Mark,

Yes please have them sent down. Muthu is going to be gone for a week and we have a large number of comment responses to review. If an electronic copy does arrive please let us know.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 11:13 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Matt,
>
> LQD D3 has not located an electronic copy of the materials. D3 has the five hard copy binders containing the comment response materials and are trying to arrange a drop-off with Cheyenne staff via normal travel. We have no travel schedule in the next week or so that could accomplish this drop-off. If Muthu and your schedules are tight to complete this review, I can have Pat send down the hard copies.
>
> Thanks,
> Mark

On Wed, Jul 15, 2015 at 11:05 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:

> Mark, was there an electronic copy of the responses and new materials sent? If so Muthu and I would be interested in getting them to help us in the review.
>
> Thanks, Matt
>
> ---
>
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>>
>> Thanks,
>>
>> Mark Rogaczewski
>> Supervisor
>> LQD District III
>> 2100 West 5th Street
>> Sheridan, WY 82801
>> 307-675-5616
>> mark.rogaczewski@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III

2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From:	Mark Rogaczewski
To:	Matt Kunze
Cc:	Bj Kristiansen; David Myers; David Schellinger; Craig Hults; Doug Emme; Muthu Kuchanur; Stacy Page; Kim Medina; Jaime Jakes
Subject:	Re: Brook Mine Second Round Technical Review
Date:	Wednesday, July 15, 2015 11:42:40 AM

Matt,

I contacted Jeff Barron of Western Water Consultants and requested an electronic copy of the Brook Mine comment responses and application materials the Cheyenne and Sheridan offices. Mr. Barron hopes to have it to D3 tomorrow. Once it arrives, LQD D3 will send it to Cheyenne.

Thanks,

Mark

On Wed, Jul 15, 2015 at 11:20 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:

> Mark,
>
> Yes please have them sent down. Muthu is going to be gone for a week and we have a large number of comment responses to review. If an electronic copy does arrive please let us know.
>
> Thanks, Matt
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Wed, Jul 15, 2015 at 11:13 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Matt,
>>
>> LQD D3 has not located an electronic copy of the materials. D3 has the five hard copy binders containing the comment response materials and are trying to arrange a drop-off with Cheyenne staff via normal travel. We have no travel schedule in the next week or so that could accomplish this drop-off. If Muthu and your schedules are tight to complete this review, I can have Pat send down the hard copies.
>>
>> Thanks,
>> Mark
>>
>> On Wed, Jul 15, 2015 at 11:05 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:
>>
>>> Mark, was there an electronic copy of the responses and new materials sent?

If so Muthu and I would be interested in getting them to help us in the review.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>
> Thanks,
>
> Mark Rogaczewski
> Supervisor
> LQD District III
> 2100 West 5th Street
> Sheridan, WY 82801
> 307-675-5616
> mark.rogaczewski@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616

> > mark.rogaczewski@wyo.gov
>
> > E-Mail to and from me, in connection with the transaction
> > of public business, is subject to the Wyoming Public Records
> > Act and may be disclosed to third parties.
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Matt Kunze
To:	Mark Rogaczewski
Cc:	Bj Kristiansen; David Myers; David Schellinger; Craig Hults; Doug Emme; Muthu Kuchanur; Stacy Page; Kim Medina; Jaime Jakes
Subject:	Re: Brook Mine Second Round Technical Review
Date:	Wednesday, July 15, 2015 11:43:50 AM

Ok thanks!

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 11:42 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Matt,
>
> I contacted Jeff Barron of Western Water Consultants and requested an electronic copy of the Brook Mine comment responses and application materials the Cheyenne and Sheridan offices. Mr. Barron hopes to have it to D3 tomorrow. Once it arrives, LQD D3 will send it to Cheyenne.
>
> Thanks,
>
> Mark
>
> On Wed, Jul 15, 2015 at 11:20 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Mark,
>>
>> Yes please have them sent down. Muthu is going to be gone for a week and we have a large number of comment responses to review. If an electronic copy does arrive please let us know.
>>
>> Thanks, Matt
>>
>> ---
>> Matt Kunze
>> Surface Water Hydrologist, Division Services
>> Wyoming Department of Environmental Quality, Land Quality Division
>> 122 West 25th Street
>> Herschler Building 3W
>> Cheyenne, WY 82002
>> 307-777-7055
>>
>> On Wed, Jul 15, 2015 at 11:13 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>>
>>> Matt,

LQD D3 has not located an electronic copy of the materials. D3 has the five hard copy binders containing the comment response materials and are trying to arrange a drop-off with Cheyenne staff via normal travel. We have no travel schedule in the next week or so that could accomplish this drop-off. If Muthu and your schedules are tight to complete this review, I can have Pat send down the hard copies.

Thanks,
Mark

On Wed, Jul 15, 2015 at 11:05 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:

> Mark, was there an electronic copy of the responses and new materials sent? If so Muthu and I would be interested in getting them to help us in the review.
>
> Thanks, Matt
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>>
>> Thanks,
>>
>> Mark Rogaczewski
>> Supervisor
>> LQD District III
>> 2100 West 5th Street
>> Sheridan, WY 82801
>> 307-675-5616
>> mark.rogaczewski@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Pat Seurer
To:	Craig Hults; Matt Kunze; Muthu Kuchanur
Cc:	Jennifer Mickle; Tammi Pusheck; Mark Rogaczewski
Subject:	Brook Mine, TFN 6 2/025
Date:	Thursday, July 16, 2015 8:57:25 AM

FYI -
Am sending to Cheyenne today 1 binder that contains the index sheet, comments & responses and disc with the groundwater model support files and 1 disc that contains the remaining 4 binders. These binders will probably arrive in Cheyenne later this month or early next month.

Happy reviewing!!

Pat

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	Pat Seurer; Bj Kristiansen
Cc:	Craig Hults; Matt Kunze; Muthu Kuchanur; Jennifer Mickle; Tammi Pusheck
Subject:	Re: Brook Mine, TFN 6 2/025
Date:	Thursday, July 16, 2015 2:33:06 PM

Pat,

Thanks for sending the electronic versions to Cheyenne to assist their reviews.

Matt and Muthu,

Please feel free to contact BJ or I if you have any questions.

Mark

On Thu, Jul 16, 2015 at 8:57 AM, Pat Seurer <pat.seurer@wyo.gov> wrote:

> FYI -
> Am sending to Cheyenne today 1 binder that contains the index sheet, comments & responses and disc with the groundwater model support files and 1 disc that contains the remaining 4 binders. These binders will probably arrive in Cheyenne later this month or early next month.
>
> Happy reviewing!!
>
> Pat
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: andrew kuhlmann
To: Thomas Sansonetti
Subject: Re: Ramaco"s Response to WLDQ concerning Wyoming AG comments
Date: Friday, July 17, 2015 7:59:48 AM

Tom,

Good to hear from you. I may have to be out of town all day on the 11th, but I should be available August 10th. Just let me know what time works best for you.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: Out of Office: Ramaco"s Response to WLDQ concerning Wyoming AG comments
Date: Friday, July 17, 2015 8:00:25 AM

I am currently out of the office in Anchorage, Alaska at the RMMLI annual conference. I will be returning to the office on Monday, July 20. I will have limited access to email and voice mail, but will check periodically. If you need assistance before my return, please contact one of my secretaries, Sandy Fletcher 303-290-1612 or Valerie Arias 307.778.4212. Thanks, Tom

From:	Muthu Kuchanur
To:	Mark Rogaczewski
Cc:	Pat Seurer; Bj Kristiansen; Matt Kunze
Subject:	Re: Brook Mine, TFN 6 2/025
Date:	Friday, July 17, 2015 8:38:13 AM

Thanks Mark and Pat. We will keep you/BJ posted as soon as we get a chance to look at the electronic copy. I will be out of Office for entire next week for a TIPS course. I will do my best to meet the August 4th review deadline.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Thu, Jul 16, 2015 at 2:33 PM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Pat,
>
> Thanks for sending the electronic versions to Cheyenne to assist their reviews.
>
> Matt and Muthu,
>
> Please feel free to contact BJ or I if you have any questions.
>
> Mark
>
> On Thu, Jul 16, 2015 at 8:57 AM, Pat Seurer <pat.seurer@wyo.gov> wrote:
>
>> FYI -
>> Am sending to Cheyenne today 1 binder that contains the index sheet, comments & responses and disc with the groundwater model support files and 1 disc that contains the remaining 4 binders. These binders will probably arrive in Cheyenne later this month or early next month.
>>
>> Happy reviewing!!
>>
>> Pat
>>
>>
>>

> Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Muthu Kuchanur
Cc: Pat Seurer; Bj Kristiansen; Matt Kunze
Subject: Re: Brook Mine, TFN 6 2/025
Date: Friday, July 17, 2015 8:51:25 AM

Thanks for the update.

mark

On Fri, Jul 17, 2015 at 8:38 AM, Muthu Kuchanur <muthu.kuchanur@wyo.gov> wrote:

> Thanks Mark and Pat. We will keep you/BJ posted as soon as we get a chance to look at the electronic copy. I will be out of Office for entire next week for a TIPS course. I will do my best to meet the August 4th review deadline.
>
> Best regards,
> Muthu
>
> ---
> Muthu Kuchanur, Ph.D., P.E.
>
> Geology Supervisor,
> Division Services - Land Quality Division,
> Wyoming Department of Environmental Quality,
> Cheyenne - 82002
>
> Phone: 307-777-7132
> Email: muthu.kuchanur@wyo.gov
>
> On Thu, Jul 16, 2015 at 2:33 PM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Pat,
>>
>> Thanks for sending the electronic versions to Cheyenne to assist their reviews.
>>
>> Matt and Muthu,
>>
>> Please feel free to contact BJ or I if you have any questions.
>>
>> Mark
>>
>> On Thu, Jul 16, 2015 at 8:57 AM, Pat Seurer <pat.seurer@wyo.gov> wrote:
>>
>>> FYI -
>>> Am sending to Cheyenne today 1 binder that contains the index sheet, comments & responses and disc with the groundwater model support files and 1 disc that contains the remaining 4 binders. These binders will probably arrive in Cheyenne later this month or early next month.
>>>
>>> Happy reviewing!!
>>>
>>> Pat

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matt Kunze
To: Mark Rogaczewski
Cc: Muthu Kuchanur; Pat Seurer; Bj Kristiansen
Subject: Re: Brook Mine, TFN 6 2/025
Date: Friday, July 17, 2015 10:09:40 AM

Thanks Pat for sending the disks. Once we receive I will put them in the same location as the other Brook Mine files that BJ set up on our server.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Fri, Jul 17, 2015 at 8:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Thanks for the update.
>
> mark
>
> On Fri, Jul 17, 2015 at 8:38 AM, Muthu Kuchanur <muthu.kuchanur@wyo.gov> wrote:
>
>> Thanks Mark and Pat. We will keep you/BJ posted as soon as we get a chance to look at the electronic copy. I will be out of Office for entire next week for a TIPS course. I will do my best to meet the August 4th review deadline.
>>
>> Best regards,
>> Muthu
>>
>>
>> ---
>> Muthu Kuchanur, Ph.D., P.E.
>>
>> Geology Supervisor,
>> Division Services - Land Quality Division,
>> Wyoming Department of Environmental Quality,
>> Cheyenne - 82002
>>
>> Phone: 307-777-7132
>> Email: muthu.kuchanur@wyo.gov
>>
>>
>> On Thu, Jul 16, 2015 at 2:33 PM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>>
>>> Pat,
>>>
>>> Thanks for sending the electronic versions to Cheyenne to assist their reviews.

Matt and Muthu,

Please feel free to contact BJ or I if you have any questions.

Mark

On Thu, Jul 16, 2015 at 8:57 AM, Pat Seurer <pat.seurer@wyo.gov> wrote:

FYI -
Am sending to Cheyenne today 1 binder that contains the index sheet, comments & responses and disc with the groundwater model support files and 1 disc that contains the remaining 4 binders. These binders will probably arrive in Cheyenne later this month or early next month.

Happy reviewing!!

Pat

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street

Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: Re: Ramaco"s Response to WLDQ concerning Wyoming AG comments
Date: Friday, July 17, 2015 10:48:04 AM

Hi Andrew!

How about late afternoon around four pm at your office? Tom

Sent from my iPhone

> On Jul 17, 2015, at 6:00 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:
>
> Tom,
>
> Good to hear from you. I may have to be out of town all day on the 11th, but I should be available August 10th. Just let me know what time works best for you.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

From: andrew kuhlmann
To: Thomas Sansonetti
Subject: Re: Ramaco"s Response to WLDQ concerning Wyoming AG comments
Date: Friday, July 17, 2015 11:04:30 AM

Tom,

That will work great. See you then.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

From: BJ Kristiansen
To: Matt Kunze
Subject: RE: Bear Lodge Rare Earth Mine Application
Date: Tuesday, July 21, 2015 6:47:40 AM

Here you go Matt, though mapping on your server from here may be a bit off:

L:\PERMITS\TFN 5 6-221 Bear Lodge Project

-bj

From: Matt Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Monday, July 13, 2015 10:11 AM
To: Bj Kristiansen
Subject: Bear Lodge Rare Earth Mine Application

Hi Bj,

In your review request letter, you mentioned the permit application would also be electronic. Would you mind putting this on our server here, like you did for the Brook Mine files? Because of our move we are going to have limited access to the hard copy files for a period of time, but we are not sure when exactly.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Matt Kunze
To:	BJ Kristiansen
Cc:	Muthu Kuchanur
Subject:	Re: Bear Lodge Rare Earth Mine Application
Date:	Tuesday, July 21, 2015 7:06:52 AM

Ok thanks Bj…I found the files.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Jul 21, 2015 at 6:48 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Here you go Matt, though mapping on your server from here may be a bit off:
>
> L:\PERMITS\TFN 5 6-221 Bear Lodge Project
>
> -bj
>
> **From:** Matt Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Monday, July 13, 2015 10:11 AM
> **To:** Bj Kristiansen
> **Subject:** Bear Lodge Rare Earth Mine Application
>
> Hi Bj,
>
> In your review request letter, you mentioned the permit application would also be electronic. Would you mind putting this on our server here, like you did for the Brook Mine files? Because of our move we are going to have limited access to the hard copy files for a period of time, but we are not sure when exactly.
>
> Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

122 West 25th Street

Herschler Building 3W

Cheyenne, WY 82002

307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matt Kunze
To: Muthu Kuchanur
Subject: Brook Mine files and responses
Date: Tuesday, July 21, 2015 7:39:06 AM

Muthu,

Jen downloaded the files to:

F:\Division\LQD\PERMITS\TFN 6 2-025 Brook Mine

I did not see a Word document of the response letter, so I had to scan it. There was a lot of pages so it auto-created 7 different PDFs.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Shannon Anderson
To: Jill Morrison; Kyle Wendtland; sanderson@powderriverbasin.org
Cc: Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
Subject: RE: Meeting with New LQD Administrator on Powder River Coal Concerns
Date: Wednesday, July 22, 2015 2:45:54 PM

Hi Kyle, just following up. In addition to answering Jill's question, could you let us know how your meeting with Mark went on the Ramaco permit and if you could give us an update on the status of the permitting process. Thanks so much, Shannon

---

From: Jill Morrison [mailto:jmorrison@powderriverbasin.org]
Sent: Thursday, July 09, 2015 11:26 AM
To: 'Kyle Wendtland'; 'Shannon Anderson'
Cc: 'Alan Edwards'; 'Margie MacDonald'; 'Dan Cohn'; 'Franklin P Bartlett'; 'Neil Ruebush'
Subject: RE: Meeting with New LQD Administrator on Powder River Coal Concerns

Thanks Kyle. Could you let us know when the next Coal Working Group meeting is scheduled so we can attend if we are able Best, Jill Morrison.

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Thursday, July 09, 2015 10:38 AM
To: Shannon Anderson
Cc: Alan Edwards; Jill Morrison; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Thank you for making time to meet with us while you were in Cheyenne. We appreciate the open communication and look forward to meeting with you in the future.

Kyle

On Thu, Jul 9, 2015 at 8:44 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Dear Kyle & Alan,

I just wanted to thank you for meeting with us yesterday. We found the meeting productive and useful and we hope you did too. We believe it's important to keep the communication lines open and we hope this was just the first of many opportunities to discuss our concerns. We'll be following up on a few items soon.

Thanks again,
Shannon

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Monday, July 06, 2015 10:23 AM
To: Shannon Anderson
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Yes, we are scheduled to meet with you July 8, 2015 at 8:00 am. We will be meeting in the Bighorn conference room at the Herschler Building 4th floor west.

Thank you, Kyle

On Mon, Jul 6, 2015 at 9:54 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Hi Kyle, I just wanted to check in and confirm that the agenda looks ok to you for our meeting on Wednesday morning. Also wanted to confirm that we should come to the Herschler Building 3rd floor West or has LQD moved yet? Thanks, Shannon

---

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Wednesday, June 24, 2015 11:35 AM
To: <sanderson@powderriverbasin.org>
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Good morning Shannon

Thank you for the updated information I will review in detail early next week

Kyle

Sent from my iPhone

On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle & Alan (and others):
>
> Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).
>
> Our proposed agenda is
>
> 1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion

2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?

3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies

4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?

5. (if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?

We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.

Thanks, and I look forward to seeing you on July 8th.
Shannon

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Kyle Wendtland; andrew kuhlmann; Bj Kristiansen
Subject: Brooks Mine Landowner Consent
Date: Thursday, July 23, 2015 11:06:22 AM

Kyle and Andrew,

Bj and I have been informed that the RAMACO vs Ambre landowner law suit is to have a decision today from the District Court in Sheridan. We will keep you posted on any decisions we are made aware of.

Thanks,

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Kyle Wendtland
To:	Shannon Anderson
Cc:	Jill Morrison; Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
Subject:	Re: Meeting with New LQD Administrator on Powder River Coal Concerns
Date:	Thursday, July 23, 2015 11:52:01 AM

Dear Shannon and Jill:

The next Coal Working Group meeting is scheduled for August 13th, 2015. The information we have is that Ramaco is working to resolve the outstanding land issues, and this will be a court decision.

Kyle

On Wed, Jul 22, 2015 at 2:45 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Hi Kyle, just following up. In addition to answering Jill's question, could you let us know how your meeting with Mark went on the Ramaco permit and if you could give us an update on the status of the permitting process. Thanks so much, Shannon
>
> ---
>
> **From:** Jill Morrison [mailto:jmorrison@powderriverbasin.org]
> **Sent:** Thursday, July 09, 2015 11:26 AM
> **To:** 'Kyle Wendtland'; 'Shannon Anderson'
> **Cc:** 'Alan Edwards'; 'Margie MacDonald'; 'Dan Cohn'; 'Franklin P Bartlett'; 'Neil Ruebush'
> **Subject:** RE: Meeting with New LQD Administrator on Powder River Coal Concerns
>
> Thanks Kyle. Could you let us know when the next Coal Working Group meeting is scheduled so we can attend if we are able Best, Jill Morrison.
>
> **From:** Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
>
> **Sent:** Thursday, July 09, 2015 10:38 AM
> **To:** Shannon Anderson
> **Cc:** Alan Edwards; Jill Morrison; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush
> **Subject:** Re: Meeting with New LQD Administrator on Powder River Coal Concerns
>
> Dear Shannon:
>
> Thank you for making time to meet with us while you were in Cheyenne. We appreciate the open communication and look forward to meeting with you in the future.

Kyle

On Thu, Jul 9, 2015 at 8:44 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Dear Kyle & Alan,

I just wanted to thank you for meeting with us yesterday. We found the meeting productive and useful and we hope you did too. We believe it's important to keep the communication lines open and we hope this was just the first of many opportunities to discuss our concerns. We'll be following up on a few items soon.

Thanks again,

Shannon

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Monday, July 06, 2015 10:23 AM
To: Shannon Anderson
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Yes, we are scheduled to meet with you July 8, 2015 at 8:00 am. We will be meeting in the Bighorn conference room at the Herschler Building 4th floor west.

Thank you, Kyle

On Mon, Jul 6, 2015 at 9:54 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Hi Kyle, I just wanted to check in and confirm that the agenda looks ok to you for our meeting on Wednesday morning. Also wanted to confirm that we should come to the Herschler Building 3rd floor West or has LQD moved yet? Thanks, Shannon

---

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Wednesday, June 24, 2015 11:35 AM
To: <sanderson@powderriverbasin.org>
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Good morning Shannon

Thank you for the updated information I will review in detail early next week

Kyle

Sent from my iPhone

On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle & Alan (and others):

Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).

Our proposed agenda is

1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion

2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?

3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies

4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?

5. (if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?

We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.

Thanks, and I look forward to seeing you on July 8th.

Shannon

--

Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--

Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Jill Morrison
To: Kyle Wendtland; Shannon Anderson
Cc: Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
Subject: RE: Meeting with New LQD Administrator on Powder River Coal Concerns
Date: Thursday, July 23, 2015 12:03:05 PM

Thanks Kyle. Can you let us know the location and time of the coal working group meeting, we might be able to attend and it would be an opportunity for us to listen and learn something. Also, is Ramaco still responding to the deficiencies? We can call the Sheridan office to get this answer if that would be easier. We were also under the impression there is more than one outstanding land issue with Ramaco but only one is before the court. Enjoy Frontier Days. Jill

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Thursday, July 23, 2015 11:52 AM
To: Shannon Anderson
Cc: Jill Morrison; Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon and Jill:

The next Coal Working Group meeting is scheduled for August 13th, 2015. The information we have is that Ramaco is working to resolve the outstanding land issues, and this will be a court decision.

Kyle

On Wed, Jul 22, 2015 at 2:45 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Hi Kyle, just following up. In addition to answering Jill's question, could you let us know how your meeting with Mark went on the Ramaco permit and if you could give us an update on the status of the permitting process. Thanks so much, Shannon

---

From: Jill Morrison [mailto:jmorrison@powderriverbasin.org]
Sent: Thursday, July 09, 2015 11:26 AM
To: 'Kyle Wendtland'; 'Shannon Anderson'
Cc: 'Alan Edwards'; 'Margie MacDonald'; 'Dan Cohn'; 'Franklin P Bartlett'; 'Neil Ruebush'
Subject: RE: Meeting with New LQD Administrator on Powder River Coal Concerns

Thanks Kyle. Could you let us know when the next Coal Working Group meeting is scheduled so we can attend if we are able Best, Jill Morrison.

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Thursday, July 09, 2015 10:38 AM
To: Shannon Anderson
Cc: Alan Edwards; Jill Morrison; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Thank you for making time to meet with us while you were in Cheyenne. We appreciate the open communication and look forward to meeting with you in the future.

Kyle

On Thu, Jul 9, 2015 at 8:44 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Dear Kyle & Alan,

I just wanted to thank you for meeting with us yesterday. We found the meeting productive and useful and we hope you did too. We believe it's important to keep the communication lines open and we hope this was just the first of many opportunities to discuss our concerns. We'll be following up on a few items soon.

Thanks again,
Shannon

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Monday, July 06, 2015 10:23 AM
To: Shannon Anderson
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Yes, we are scheduled to meet with you July 8, 2015 at 8:00 am. We will be meeting in the Bighorn conference room at the Herschler Building 4th floor west.

Thank you, Kyle

On Mon, Jul 6, 2015 at 9:54 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Hi Kyle, I just wanted to check in and confirm that the agenda looks ok to you for our meeting on Wednesday morning. Also wanted to confirm that we should come to the Herschler Building 3rd floor West or has LQD moved yet? Thanks, Shannon

---

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Wednesday, June 24, 2015 11:35 AM
To: <sanderson@powderriverbasin.org>
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Good morning Shannon

Thank you for the updated information I will review in detail early next week

Kyle

Sent from my iPhone

On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle & Alan (and others):
>
> Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).
>
> Our proposed agenda is
>
> 1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion
>
> 2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?
>
> 3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies
>
> 4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?
>
> 5. (if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?
>
> We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.
>
> Thanks, and I look forward to seeing you on July 8th.
> Shannon

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Kyle Wendtland
To:	Jill Morrison
Cc:	Shannon Anderson; Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
Subject:	Re: Meeting with New LQD Administrator on Powder River Coal Concerns
Date:	Thursday, July 23, 2015 1:11:10 PM

Dear Shannon and Jill:

The Coal Working Group Meeting will be held on August 13, 2015 at 9:00 am at the Casper office at 152, North Durbin street. Ramaco is in the second round technical review. The Division will not comment further on the land status as it is in litigation.

Kyle

On Thu, Jul 23, 2015 at 12:02 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Thanks Kyle. Can you let us know the location and time of the coal working group meeting, we might be able to attend and it would be an opportunity for us to listen and learn something. Also, is Ramaco still responding to the deficiencies? We can call the Sheridan office to get this answer if that would be easier. We were also under the impression there is more than one outstanding land issue with Ramaco but only one is before the court. Enjoy Frontier Days. Jill
>
> **From:** Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
> **Sent:** Thursday, July 23, 2015 11:52 AM
> **To:** Shannon Anderson
> **Cc:** Jill Morrison; Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
> **Subject:** Re: Meeting with New LQD Administrator on Powder River Coal Concerns
>
> Dear Shannon and Jill:
>
> The next Coal Working Group meeting is scheduled for August 13th, 2015. The information we have is that Ramaco is working to resolve the outstanding land issues, and this will be a court decision.
>
> Kyle
>
> On Wed, Jul 22, 2015 at 2:45 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
>
> Hi Kyle, just following up. In addition to answering Jill's question, could you let us know how your meeting with Mark went on the Ramaco permit and if you could give us an

update on the status of the permitting process. Thanks so much, Shannon

---

From: Jill Morrison [mailto:jmorrison@powderriverbasin.org]
Sent: Thursday, July 09, 2015 11:26 AM
To: 'Kyle Wendtland'; 'Shannon Anderson'
Cc: 'Alan Edwards'; 'Margie MacDonald'; 'Dan Cohn'; 'Franklin P Bartlett'; 'Neil Ruebush'
Subject: RE: Meeting with New LQD Administrator on Powder River Coal Concerns

Thanks Kyle. Could you let us know when the next Coal Working Group meeting is scheduled so we can attend if we are able Best, Jill Morrison.

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]

Sent: Thursday, July 09, 2015 10:38 AM
To: Shannon Anderson
Cc: Alan Edwards; Jill Morrison; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Thank you for making time to meet with us while you were in Cheyenne. We appreciate the open communication and look forward to meeting with you in the future.

Kyle

On Thu, Jul 9, 2015 at 8:44 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Dear Kyle & Alan,

I just wanted to thank you for meeting with us yesterday. We found the meeting productive and useful and we hope you did too. We believe it's important to keep the communication lines open and we hope this was just the first of many opportunities to discuss our concerns. We'll be following up on a few items soon.

Thanks again,

Shannon

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Monday, July 06, 2015 10:23 AM
To: Shannon Anderson
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Yes, we are scheduled to meet with you July 8, 2015 at 8:00 am. We will be meeting in the Bighorn conference room at the Herschler Building 4th floor west.

Thank you, Kyle

On Mon, Jul 6, 2015 at 9:54 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Hi Kyle, I just wanted to check in and confirm that the agenda looks ok to you for our meeting on Wednesday morning. Also wanted to confirm that we should come to the Herschler Building 3rd floor West or has LQD moved yet? Thanks, Shannon

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Wednesday, June 24, 2015 11:35 AM
To: <sanderson@powderriverbasin.org>
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Good morning Shannon

Thank you for the updated information I will review in detail early next week

Kyle

Sent from my iPhone

On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle & Alan (and others):
>
> Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).
>
> Our proposed agenda is
>
> 1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion
>
> 2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?
>
> 3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are

applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies

4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?

5. (if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?

We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.

Thanks, and I look forward to seeing you on July 8th.

Shannon

--

Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

From:	Jill Morrison
To:	Kyle Wendtland
Cc:	Shannon Anderson; Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
Subject:	RE: Meeting with New LQD Administrator on Powder River Coal Concerns
Date:	Thursday, July 23, 2015 2:41:14 PM

thanks

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Thursday, July 23, 2015 1:11 PM
To: Jill Morrison
Cc: Shannon Anderson; Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon and Jill:

The Coal Working Group Meeting will be held on August 13, 2015 at 9:00 am at the Casper office at 152, North Durbin street. Ramaco is in the second round technical review. The Division will not comment further on the land status as it is in litigation.

Kyle

On Thu, Jul 23, 2015 at 12:02 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:
Thanks Kyle. Can you let us know the location and time of the coal working group meeting, we might be able to attend and it would be an opportunity for us to listen and learn something. Also, is Ramaco still responding to the deficiencies? We can call the Sheridan office to get this answer if that would be easier. We were also under the impression there is more than one outstanding land issue with Ramaco but only one is before the court. Enjoy Frontier Days. Jill

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Thursday, July 23, 2015 11:52 AM
To: Shannon Anderson
Cc: Jill Morrison; Alan Edwards; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush; andrew kuhlmann
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon and Jill:

The next Coal Working Group meeting is scheduled for August 13th, 2015. The information we have is that Ramaco is working to resolve the outstanding land issues, and this will be a court decision.

Kyle

On Wed, Jul 22, 2015 at 2:45 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Hi Kyle, just following up. In addition to answering Jill's question, could you let us know how your meeting with Mark went on the Ramaco permit and if you could give us an update on the status of the permitting process. Thanks so much, Shannon

From: Jill Morrison [mailto:jmorrison@powderriverbasin.org]
Sent: Thursday, July 09, 2015 11:26 AM
To: 'Kyle Wendtland'; 'Shannon Anderson'
Cc: 'Alan Edwards'; 'Margie MacDonald'; 'Dan Cohn'; 'Franklin P Bartlett'; 'Neil Ruebush'
Subject: RE: Meeting with New LQD Administrator on Powder River Coal Concerns

Thanks Kyle. Could you let us know when the next Coal Working Group meeting is scheduled so we can attend if we are able Best, Jill Morrison.

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Thursday, July 09, 2015 10:38 AM
To: Shannon Anderson
Cc: Alan Edwards; Jill Morrison; Margie MacDonald; Dan Cohn; Franklin P Bartlett; Neil Ruebush
Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Thank you for making time to meet with us while you were in Cheyenne. We appreciate the open communication and look forward to meeting with you in the future.

Kyle

On Thu, Jul 9, 2015 at 8:44 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Dear Kyle & Alan,

I just wanted to thank you for meeting with us yesterday. We found the meeting productive and useful and we hope you did too. We believe it's important to keep the communication lines open and we hope this was just the first of many opportunities to discuss our concerns. We'll be following up on a few items soon.

Thanks again,
Shannon

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Monday, July 06, 2015 10:23 AM
To: Shannon Anderson
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Dear Shannon:

Yes, we are scheduled to meet with you July 8, 2015 at 8:00 am. We will be meeting in the Bighorn conference room at the Herschler Building 4th floor west.

Thank you, Kyle

On Mon, Jul 6, 2015 at 9:54 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Hi Kyle, I just wanted to check in and confirm that the agenda looks ok to you for our meeting on Wednesday morning. Also wanted to confirm that we should come to the Herschler Building 3rd floor West or has LQD moved yet? Thanks, Shannon

---

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Wednesday, June 24, 2015 11:35 AM
To: <sanderson@powderriverbasin.org>
Cc: Fleischman, Jeffrey; Alan Edwards; Jill Morrison; Carol Bilbrough; Kimber Wichmann; Jerimiah Rieman; Todd Parfitt; andrew kuhlmann; Margie MacDonald; Dan Cohn; Gillian Malone; Marilyn Ham

Subject: Re: Meeting with New LQD Administrator on Powder River Coal Concerns

Good morning Shannon

Thank you for the updated information I will review in detail early next week

Kyle

Sent from my iPhone

On Jun 24, 2015, at 7:53 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle & Alan (and others):
>
> Our attendees at the July 8th meeting will be Jill Morrison, Margie MacDonald, Dan Cohn, Marilyn Ham, me (and potentially Gillian Malone).
>
> Our proposed agenda is
>
> 1. Overview of Western Organization of Resource Council's report (www.underminedpromise.org), main findings and opportunities for further discussion
>
> 2. Update on Public Records Act request for records related to the self-bonding program – What is the status? When can we expect the documents?
>
> 3. Concerns about self-bonding program – we have some questions about how DEQ's review of the companies works and how the regulations are applied. We'd also like to hear any updates from DEQ or OSM about self-bonding reviews and the way forward given the financial situation of the companies

4. (if time) – update on Linc Energy project – is DEQ monitoring the situation in Australia and what is your response? Any word from the company on whether they will start-up this year and if not, what happens to their license?

5. (if time) – update on Ramaco mine permit application – has Ramaco responded to the technical deficiencies? What is the status of the process, including the DEQ prepared CHIA?

We hope Carol and Kimber will be able to join us for the meeting. If not, please let us know as we'll try and meet with them separately later that morning.

Thanks, and I look forward to seeing you on July 8th.
Shannon

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046

Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Muthu Kuchanur; matthew.kunze@wyo.gov
Subject:	Brook Mine responses to round 1 comments
Date:	Wednesday, July 29, 2015 8:34:30 AM
Attachments:	Compiled Round 1 Comment Responses.pdf image001.jpg

---

Gentlemen,

I attached the electronic version of the Brook Mine round 1 comment responses for your round 2 evaluation.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Contents

Adjudication 1
Appendix D1 2
Appendix D2 3
Appendix D3 3
Appendix D4 4
Appendix D5 5
Appendix D6 14
Appendix D7 33
Appendix D8 35
Appendix D9 37
Appendix D10 38
Appendix D11 39
Mine Plan 49
Reclamation Plan 104
Other Comments 121

Adjudication

Comment AG 1

Please also provide copies of the complaint and the answer. If there are any motions that the court has ruled on limiting or deciding any of the claims or factual or legal questions originally at issue in the case, please also provide copies of the orders, the motions, the responses to the motions, and any supporting memoranda.

Response AG 1

The Applicant's position with regard to any surface interests that may be claimed by Padlock Ranch Company and/or Big Horn Coal Company is that the Applicant alone owns the sole dominant present property right to use these surface lands for the coal mining operation described in the application, as that application has been submitted and supplemented. Applicant's sole dominant surface ownership and use interest in the relevant lands derives directly from the 1954 Deed (Attachment B) and its express reservation language. Pursuant to the controlling Wyoming Supreme Court authority set out in *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986) (Attachment C), when the Applicant already owns the dominant surface use rights for coal mining on the property, then the Applicant consents to its own use pursuant to its application by submitting the application and no other surface consents can or should be required under W.S. § 35-11-406(b)(xi). As the Land Quality Division is aware, to the extent that Padlock Ranch Company incorrectly claims some surface rights on any lands described in the 1954 Deed, it necessarily could only attempt to do so fully subject to the Applicant's sole dominant surface rights to mine coal. Under the WYOMO Fuels, Inc. decision, no consent from Padlock can be required. To the extent that Big Horn Coal incorrectly claims some surface use right in this area at this time, the Applicant is proceeding with quiet title litigation (Fourth Judicial District Court, Sheridan County, Wyoming Civil No. CV 2014-372) against Big Horn Coal on this issue and has asserted its sole dominant reserved surface right to use the surface described in the 1954 Deed to mine coal there without any consent from Big Horn Coal pursuant to the WYMO Fuels, Inc. case decision. Accurate copies of the Applicant's pending summary judgment motion arguments on this issue are enclosed with this response (attachment D and E). The Applicant can and will supplement these pleadings with further documentation that is described in the pleadings upon request.

Comment AG 2

Therefore, the Division requests the Applicant to provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch Company and Big Horn Coal Company are or are not "residential or agricultural landowners" under the statutory definition in W.S. § 35-11-406(b)(xi).

Response AG 2

Please see response AG 1.

Comment DM 1

Adjudication – Appendix B2 – Groundwater Rights – There is a groundwater well that is missing in this volume. The listing is as follows:

Barbula #2

Permit No. 85631W

Location: SW NW Section 21, T57N R84W

Please add this entry to the table and to any corresponding maps.

Response DM 1

Adjudication text page WR-12 has been updated to include Barbula # 2 (P85631W) as well as Adjudication Exhibits 5 & 8.

Appendix D1

Comment BJ 1

Appendix D1, Land Use, Table D1. 3-1; It is unnecessary to list the Expired Permit category of gas well permits. Since these APDs have expired without completion there is no related activity to the site. Listing of a non-event is not required. This also applies to the NO category since this indicates that the APD was refused, thus never became permitted through WOGCC.

Response BJ 1

Revised Table D1.3-1 as requested.

Comment SP 1

Appendix D-1. Exhibit D1.1-1. The landuses defined in Chapter 1 should be used on this Exhibit. Not the entire Brook Mine Permit falls neatly into these definitions so the following comments provide guidance:

a) The railroad, primary roads, oil and gas wells, and the facilities for Taylor Quarry would be considered Industrial commercial and may be shown with the vertical line stippling. The rest of the vertical stippling should be removed.

b) The 4.5 acres of Agricultural lands would have the Land use of Cropland. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no changes are needed to the map for this land use.

c) The 12.8 acres of water might be listed under multiple landuses such as Grazingland, Fish and Wildlife habitat or Recreational. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no change is needed to the map for this land use.

d) The 4,421.8 acres remaining should be shown as Grazingland and Fish and Wildlife habitat. The legend on the map should have Fish and Wildlife Habitat added to Past and Present Grazingland landuse. The stippled area on the map will stay the same.

e) No changes are needed to the areas identified as Recreational.

Response SP 1

Revised Exhibit D1.1-1 as requested.

Comment SP 2

Appendix D-1. Text that refers to the areas mined as Industrial commercial should be revised to remove the mining. A reference to Section 1.6 on historic mining can be made in Section D1.3.1. Grazingland. The reclaimed mined lands are now being used as Grazingland. The difference between the mined and never been mined is defined as the vegetation community that is called Reclaimed. Section D1.6 discusses the historic mining of the area and the discussion on coal mining in Industrial commercial (D1.4.3) can be removed.

Response SP 2

Revised text as requested.

Appendix D2

Comment BJ 2

Appendix D2, History, There are no comments for this section of the application. The narrative is well written and comprehensive.

Response BJ 2

No response is necessary.

Appendix D3

No comments were received regarding Appendix D3.

Appendix D4

Comment BJ 3

Appendix D4, Climatology, General comment – Is there no data for climatology that is more recent than 1990? It exists, therefore needs to be represented. Please locate and include the most recent climatological data. Twenty year-old data bears little resemblance to Sheridan County climate today so characterization of the present climate with a 20 year gap is problematic. Please reevaluate the data in light of locating and use more recent information.

Response BJ 3

Revised wind, relative humidity, and degree day data to reflect period between 1990 and 2013. Note, as can be observed by updated data, little change occurred in averages reported for wind, relative humidity, and degree days. Therefore, the wind rose provided in Figure D4.2-6 is deemed to still be representative of the Sheridan area. Revised Figure D4.2-1, Figure D4.2-11, Table D4.1-1, Table D4.2-2, Table D4.2-3, and Table D4.2-7 in response to this comment.

Comment BJ 4

Appendix D4, Climatology, Section D4.2.6, Why was 65°F used as the baseline temperature? Also, why were the high and low temperatures set to 86°F and 50°F respectively? Please clarify.

Response BJ 4

Revised text to clarify the choice of high and low temperatures.

Comment BJ 5

Appendix D4, Climatology, Figure 4.2-11, Are the degree days the total number of days that match the data points for the entire period from 1961 through 1990? This indicates that the data represented along the Y axis covers a period of 30 years on a daily basis. Please clarify.

Response BJ 5

Revised text with definitions of heating, cooling, and growing degree days to clarify Figure 4.2-11. Degree days are essentially a unit of measure like temperature, velocity, etc. A degree day signifies the number of degrees per day to heat or cool to a specified base temperature (most commonly 65°F). Each degree day is summed over the course of a month to estimate the total number of degree days that month. For example, July may have 0 heating degree days because all days are over 65°F, but will have cooling degree days nearly every day of the month. Figure 4.2-11 shows the average monthly degree days over the specified periods of data.

Appendix D5

Comment BJ 6

Appendix D5, Topography, Geology, and Overburden Assessment, Section D5.4.1, Paragraph 2 refers to "marginally suitable Selenium levels" as defined in LQD Guideline No.1. Guideline 1 has two separate sets of chemical quality criteria tables. Appendix 1 occurs on pages 17-21 as well as on pages 38-43. The first set of tables have been superseded by the second set of tables. Please use the tables on pages 38-43 when determining material suitability. The first Appendix 1 is being removed from the guideline.

The newer tables define the Selenium target as follows:

Suitable < 0.3 ppm

Marginal 0.3 – 0.8 ppm

Unsuitable > 0.8 ppm (dependent on premining water quality and overburden quality)

These values are established for uplands and ephemeral drainages unless it can be shown that Selenium impregnated materials will be buried above the groundwater potentiometric surface and below the reclaimed surface root zone. Other quality criteria have not changed.

Response BJ 6

Revised text as requested to reflect the revised LQD Appendix 1.

Comment BJ 7

Appendix D5, Topography, Geology, and Overburden Assessment, Figure D5.3-2, What units are expressed in the figure as the %g? Please include a footnote clarifying the measurement parameter.

Response BJ 7

Updated Figure D5.3-2 as requested.

Comment BJ 8

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-1, Are the Northings and Eastings in State Plane coordinates? It is assumed that they are but please verify this. The title at the top of the page could read Drill Hole Tabulations (State Plane Coordinates)

Response BJ 8

Updated as requested.

Comment BJ 9

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-2, Please rearrange the Lithologic and Electric logs in such a way that the Electric log immediately follows the Lithologic log. This allows for a more comprehensive examination of the data.

Response BJ 9

Rearranged logs as requested.

Comment BJ 10

Appendix D5, Topography, Geology, and Overburden Assessment, Holes R12-000 through R12-020 have the Northings and Eastings reversed. Please correct.

Response BJ 10

Updated as requested.

Comment BJ 11

Appendix D5, Topography, Geology, and Overburden Assessment, The Lithologic logs with the AMBRE designation 02, 03, and 04 do not have coordinates or elevations. Please provide coordinates and elevations for these three holes.

Response BJ 11

Updated as requested.

Comment BJ 12

Appendix D5, Topography, Geology, and Overburden Assessment, Hole R13-018 appears to have erroneous coordinates. The Northing is listed as 11,941,802. It should probably be 1,941,802. The elevation is shown as 43,887.9, where it should probably be closer to 3,887.9. Please verify and correct.

Hole R13-024 has a very high Northing at 61,941,541 and elevation at 73,885.4. These may be 1,941,541 and 3,885.4, respectively. Please verify and correct

Response BJ 12

Updated as requested.

Comment BJ 13

Appendix D5, Topography, Geology, and Overburden Assessment, A suggestion for future exploration: Ask the geophysical logger to reduce the gain on the gamma logs. The readjustment bounce on the logs makes them a bit difficult to read and interpret.

Response BJ 13

No response required.

Comment BJ 14

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-5, Pg. D5-5-4, The splitting tensile strength tests were run on four (4) samples from two (2) holes representing roof, coal, and floor conditions.

a) Why were these locations used as representative of the lithologies encountered during mining?

b) Are these few samples representative of all conditions expected to be encountered by the continuous miner (CM)?

Please elaborate and clarify the narrative. A statement must be made that strength testing will be performed on at least one set of samples per mining panel prior to use of the CM to insure that conditions are favorable for roof retention without subsidence. Lithology in this area is inconsistent and rock strength can vary accordingly. Using the data provided on the four samples tested indicates that some of the overburden from hole R13-19 is unsuitable for highwall mining, based on the CAT® Site Evaluation Tool For Highwall Miners;

(http://webtools.cat.com/globalmining/highwallminers/index.html).

Response BJ 14

Appendix D5 Section D5.3.3.2 has been updated as requested.

Comment BJ 15

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-4, Exhibits 1 – 7, Please include the drill hole locations on these isopach maps.

Response BJ 15

Updated as requested.

Comment BJ 16

Appendix D5, Topography, Geology, and Overburden Assessment, Exhibit 8, The map labeled as the isopach map of the Lower Masters bed is a contour of a surface. Please replace the contour map with the appropriate isopach map

Response BJ 16

Updated as requested.

Comment BJ 59

EXHIBITS, Addendum D5-4, Exhibit 1, The title on the map declares that this is an overburden isopach, but the bed name is missing. Please indicate which bed this map pertains to.

Response BJ 59

Updated Exhibit 1 of Addendum D5-4 as requested.

Comment BJ 60

EXHIBITS, Addendum D5-4, Exhibit 8, The name of the PDF file for this exhibit indicates that this is an isopach map of the Masters Lower coal bed. The title in the map indicates that this is the contour of the base of the Masters coal seam. Please correct the title of the PDF file.

Response BJ 60

The title of Exhibit 8 of Addendum D5-4 has been revised in the electronic copy, as requested.

Comment BJ 61

EXHIBITS, Addendum D5-6, Exhibit 1, We commend RAMACO for sampling overburden locations on 80 acre spacing. There are some gaps in the sampling plan, however, that need to have core holes drilled to fill them. The underground Coal Rules and Regulations in Chapter 7, Section 1(a)(i) are specific on ensuring that overburden geology is characterized in all locations where overburden will be removed or subsidence may occur. This essentially means that all areas above the planned coal panels need representative cores drilled to a sufficient density, approximately one hole for every quarter section of affected area. Based on that, the following locations still need to be characterized by overburden sampling:

NE1/4, sec.22, T.57N., R.84W.

NW1/4, sec.15, T.57N., R.84W.

NW1/4, sec.14, T.57N., R.85W.

SE1/4, sec.10, T.57N., R.85W.

Response BJ 61

A drilling rig was not able to enter the areas NW1/4, Sec.14, T.57N., R.85W and SE1/4, Sec.10, T.57N., R.85W. due to the steepness of the terrain, therefore no samples were obtained. Sampling data for drill holes BH 166-78 and BE 326-78 have been incorporated into Addendum D5-2 and Addendum D5-7 to characterize the overburden in Sections 15 and 22.

Comment BJ 62

EXHIBITS, Addendum D5-6, Exhibit D5.1-1, Kudos to the staff member that created this slope analysis map. It is clear and concise and the histogram is very informative. Good job.

Response BJ 62

Thank you for this comment.

Comment DS 1

Appendix D5, The Coal Rules and Regulations, Chapter 7, Section 1(a)(i)(A) states that information required for the geological description pursuant to Chapter 2, shall be as follows: for areas where surface operations and facilities will cause removal of overburden down to a level of the coal seam, all information outlined in Chapter 2. Overburden sampling has not been performed in many of the locations where overburden will be removed during the mining operations. Additional sampling will be required to assess overburden chemistry in all areas where overburden removal will occur. The intensity of sampling should be 1 core per 160 acres (per quarter section). The LQD requests sampling every 1,900 linear feet on longer proposed disturbance areas or, at minimum, two cores within shorter disturbances separated sufficiently to provide a representative characterization of the proposed disturbance.

> a. Not all overburden has been characterized during analysis. Several lenses of shallow coal mixed with partings or narrow coal seams that will not be mined were not characterized. Because all overburden must be handled so as not to negatively affect surface water, groundwater or vegetation, all overburden must be adequately characterized. Therefore, the LQD requests additional characterization of all overburden that will be backfilled into disturbed areas. It must also be stated that special handling and/or identification and use of topsoil/subsoil replacement may be required if unsuitable backfill or soil is placed within 4 feet of the surface on upland areas or within 10 feet of the surface in stream channels.

Response DS 1

Please see response to BJ 61.

Comment DS 2

Appendix D5, Section D5.4. – documentation of protocols that differ from those approved by the Administrator in Guideline 1 typically require a signed document by LQD staff, not a request for different procedure signed by the company. This issue has been discussed with other mining companies and it has been determined that documentation of approval by LQD staff will be required if sampling/analytical protocols differ from those required by standing LQD policy. Please provide documentation of LQD staff approval for the 10-ft. overburden sampling interval.

Response DS 2

See Attachment A to this response package. This has also been added to Addendum D5-6 pages 4 and 5.

Comment DS 3

Appendix D5,Table D5.4-1 and Table D5.4-2 do not provide the current approved selenium concentration limits of 0-3 ppm (suitable), 3-8 ppm (marginal) and > 8 ppm (unsuitable). Please be sure to include the current approved suitability criteria as shown in Guideline 1, page 42. This will change the conclusions of the discussion provided in the Appendix D5 text. Also, in Table D5.4-2, please provide the correct units for analytical results in mg/Kg, not mg/L.

Response DS 3

Please refer to BJ 6 response. Appendix D5 text, Table D5.4-1, and Table D5.4-2 are updated as requested.

Comment DS 4

Appendix D5, The permit application provided to LQD staff for review has duplicated data provided after the map identified as Exhibit 1 which should be deleted. The exhibit should also be better identified as Exhibit D5-1 or something similar to clarify placement in the permit application should it become separated from the document in the future.

Response DS 4

The electronic copies were provided to LQD staff for review purposes. The hard copy on file is the official version. Also, please see response to Comment DS 5.

Comment DS 5

Appendix D5, Comparisons were made between Exhibit 1, the soils map and the Mine Plan map. Distinct differences in the affected area and permit boundaries were observed. Please be sure that correct boundaries for the proposed affected area and permit area are provided on all maps. Please also provide the contour interval on this exhibit.

Response DS 5

Addendum D5-6 is a copy of the overburden sampling plan as presented to WDEQ on 8/26/2013, which referenced Exhibit 1. Therefore, no changes to the exhibit will be made.

Comment KM 2

Appendix D5, Page D 5-9 refers to samples collected from roof and floor from "many" locations throughout the permit area. However, supporting documentation appeared to be from only two borings and included two roof and one floor sample. In addition, the laboratory noted the floor sample did not have sufficient length and a correction factor was used to determine unconfined compressive strength. Additional structural analysis of the overburden, interburden and floor is required.

Response KM 2

During preparation of the MSHA Ground Control Plan additional coring of the coal and overburden will occur, data gathered from this activity will be supplied to WDEQ/LQD when it is received. Please see response to BJ 14.

Comment KM 3

Appendix D5, Please provide a discussion of the structural analysis of the overburden and interburden. The discussion shall address the potential for subsidence during and after mining.

Response KM 3

Structural analysis of the overburden, interburden, floor, and roof must be conducted for the MSHA Ground Control Plan. Information gathered for this plan will be provided when it is received. No text was updated in response to this comment. Please see response to BJ 14.

Comment KM 4

Appendix D5, Please discuss the aquifer(s) below the lowest coal seam and the potential for mining to impact these aquifer(s).

Response KM 4

The lowest coal seam targeted for mining is largely dry and is also confined by a clay layer. The underburden is not considered an aquifer therefore no impacts will occur.

Comment Muk 1

Appendix D5, Section D5.3.3.2 Overburden and Interburden, 1. This section provides a discussion of the thickness of interburden and not overburden. Please provide a discussion (or a reference) on the thickness of the overburden. (MK)

Response Muk 1

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.2.

Comment Muk 2

Appendix D5, Section D5.3.3.3 Coal, 2. On Page D5-10, there is a good discussion about the thickness of the two coal seams. Please provide a description on the depth from land surface to these coal seams. (MK)

Response Muk 2

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.3.

Comment Muk 3

Appendix D5, Section D5.3.3.3 Coal, 3. Page D5-10 states, "Monarch seam exist within isolated portions of the mine areas as shown on the geologic cross sections in Addendum D5-3 and may present a secondary target." However, Table D5.3-2 does not provide the coal quality characteristics for Monarch coal seam. If monarch seam is part of the mine plan, please include the coal quality characteristics of Monarch coal seam in Table D5.3-2 and a description of thickness and depth from land surface.

Response Muk 3

Table D5.3-2 has been updated with the coal quality characteristics for the Monarch seam. The overburden and seam thickness are included on the geologic cross-sections located in Addendum D5-3 referenced in the text.

Comment Muk 4

Appendix D5, Section D5.3.3.3 Coal, 4. Please include a discussion on Dietz (1, 2, 3) coal seams, if they are present in the mine permit boundary. If they are part of the mine plan, please include the coal quality characteristics in Table D5.3-2. (MK)

Response Muk 4

Discussion about the Dietz seams has been added in Section D5.3.3.3. These coal seams are not part of the currently proposed Mine Plan. Therefore, the quality data were not included in the table.

Comment Muk 5

Appendix D5, Section D5.3 Geology of Mine Area, 5. Please provide a description of the stratigraphic units below the Masters coal seam. (MK)

Response Muk 5

Section D5.3.3.4 has been added to discuss the underburden.

Comment Muk 6

Appendix D5, Addendum D5-3 Geologic Cross Sections, 6. Several of the geologic cross sections show UNK – unknown coal seam (Stringer). Please include a brief discussion about this stringer in Section D5.3.3.3 (MK)

Response Muk 6

Discussion about the stringers with unknown names has been added to Section D5.3.3.3.

Comment Muk 7

Appendix D5, Addendum D5-4 Isopachs, 7. Please include the wells/drill holes (control points) used to interpret the isopachs and elevation contours in the maps. In addition, label all the control points with names and the thickness (or elevation, as appropriate). This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Response Muk 7

Addendum D5-4 Exhibits 1 to 8 have been updated with drill hole locations as requested. A reference to Addendum D5-2 has been added to the exhibits for seam name and thickness.

Comment Muk 8

Appendix D5, Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table, 8. Please describe these analyses, methodology, results and provide an interpretation of their applicability to the mine/reclamation plan. (MK)

Response Muk 8

Please see response to BJ 14.

Appendix D6

Comment BJ 17

Appendix D6, Hydrology, Section D6.2.3, Pg. D6-20, Narrative in the last paragraph – why were no samples taken in Hidden Water Creek? Please explain.

Response BJ 17

No flow was observed in Hidden Water Creek during baseline sampling, so no samples were taken. The text has been revised to reflect that there were no flows observed.

Comment BJ 18

Appendix D6, Hydrology, Table D6.1-8, Regarding the HEC-RAS modeling results – The values for Hidden Water Creek and Slater Creek are identical. Is this accurate or is it a typographical error? Please clarify.

Response BJ 18

Updated table to remove typographical error.

Comment BJ 19

Appendix D6, Hydrology, Addendum D6-7, The well construction summary sheets need to have the coal bed names listed on the well lithology sections to the right of the well diagrams. Please label accordingly.

Response BJ 19

Updated as requested.

Comment BJ 20

Appendix D6, Hydrology, Attachment D6-8-A, Pg. D6-8-20, A statement is made that water within both coal seams is expected to be "high quality" and "good" water. Please define the meaning of those characterizations. Are these judgments based on MCLs or some other value? Are they being classified by some constituent values? Or is there another metric being used? Please clarify.

For example; referencing WQD R&R, Chapter 8, Table I, Class I,II, or III would better define the essential characteristics of the water quality. Numerical values of critical constituents, such as TDS, could also serve to define the quality as "good". More descriptive qualifiers are needed to judge the water quality.

Response BJ 20

Revised text as requested.

Comment BJ 21

Appendix D6, Hydrology, Attachment D6-8-E, Hydrographs, The x parameter, time, is depicted in days. It appears that this scale should have been adjusted to show time in hours due to the rapid changes seen in the hydrographs. Please use a finer scale for the x axis.

Response BJ 21

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-36a and D6-8-37a. These additional hydrographs detail the water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 22

Appendix D6, Hydrology, Attachment D6-8-F, The above mentioned comment can also be applied to the Carney well hydrographs. Please adjust the x axis to hours.

Response BJ 22

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data as well. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-39a and D6-8-40a. These additional hydrographs detail the water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 23

Appendix D6, Hydrology, Addendum D6-9, Pg. D6-9-2, Please include a column in Table D6-1 that indicates the elevation of the bottom of the well or TD. The total water column is important when assessing groundwater characteristics. Please correct.

Response BJ 23

Table D6-1 has been revised as requested.

Comment BJ 24

Appendix D6, Hydrology, Addendum D6-10, Pgs. D6-10-28 through D6-10-53, On the sample analysis reports, Please provide a brief narrative at the beginning of the lab results to give context to the data. Footnotes on the pages refer to MCLs or other parameters of water quality used for classification. However, the context that is used to define these parameters is missing. The assumption is made that these quality values are derived from the WQD R&R, Chapter 8, Table I definitions. But that is

uncertain as no frame of reference is given. A brief sentence or two at the beginning of the section would clarify the numerical standards used in the report. Please adjust the narrative accordingly.

Response BJ 24

Page D6-10-27a was added to provide the requested narrative.

Comment BJ 25

Appendix D6, Hydrology, Please include the lithology of the sampled zone, either in the sampling information sheets, or on the sample analysis reports. Identification of the lithology sampled needs to be readily available with the analysis. This applies to all increments sampled. The sampled zones do have identification on the sample sheets with a shorthand nomenclature but persons unfamiliar with the lithology of the prospect area would be at a disadvantage when evaluating the sample results. A simple reference table at the beginning of the section would be sufficient. Foe example; MST=Masters, CRN=Carney, AL=Alluvium. Non-geologists need some frame of reference. Please create a clarifying narrative.

Response BJ 25

Reference text with abbreviations defined has been added on page Addendum D6-10-27a, as requested.

Comment DM 2

Appendix D6-Hydrology, D6.1x – The drainage basin description and surface water quantity sections are lacking detail. As mentioned in M. Kunze's comments, the data from the terminated Slater Creek USGS gauge, and historical monitoring data from Big Horn Mine (permit no. 213) should be included.

The data collected at the monitoring stations that is presented in Addendum D6-4 does not appear to agree with the statement that Slater Creek is a "predominantly ephemeral" stream. Please reconcile the text with the data.

Response DM 2

Peak flow data from the USGS gage station on Slater Creek has been provided. See response to MK 30. The text in Section D6.1.5.2 has been updated to clearly indicate that Slater Creek is an ephemeral stream.

Comment DM 3

Appendix D6-Hydrology, D6.2.4 States that Groundwater Rights are in Appendix E2 of the Adjudication Volume. Groundwater Rights are actually listed in Appendix B2. Please Correct.

Response DM 3

Text revised as requested.

Comment KM 5

Appendix D6, 2. The pre-mining potentiometric map for the Masters coal seam shows the elevation of the groundwater at a higher elevation than the surface elevation in Sections 11 and 12 (in the vicinity of Slater Creek outside of the permit area). Either show the potentiometric surface as doted across this area or revise the potentiometric lines such that the groundwater elevation is below the ground surface elevation. Issue addressed by BJ Kristiansen. Please see comment No. 65.

Response KM 5

Exhibits D6.2-2 and D6.2-3 have been revised as requested.

Comment KM 6

Appendix D6, 3. The groundwater elevation for the Carney coal seam in monitor well 578417-CRN was given as 3795.59. The potentiometric contour for 3800 is drawn south of this monitor well. Please correct the contour line to be consistent with the groundwater elevation shown for monitor well 578417-CRN. Correction of this contour line may also adjust how the contour lines for 3780 and 3760 are drawn, such that they may be drawn consistent with other contour lines.

Response KM 6

Contours in Exhibit D6.2-3 have been revised as requested.

Comment KM 7

Appendix D6, 4. Page D6 8-8: The text refers to the pump test in the Carney coal seam. According to the procedures in the previous section, transducers were placed in CRN and CRN-OB; however on the referenced page, it states transducers remained in MST and MST-OB after pumping. LQD believes this to be a typographical error.

Response KM 7

LQD is Correct, this is a typographical error. The sentence should read "After the pumping period, the transducers remained in CRN1 and CRN-OB until 8:00AM on November 16, 2013. Page D6-8-8 has been updated with the typographical error corrected and a replacement page is included.

Comment KM 8

Appendix D6, 5. Please discuss why the water levels rose in the Carney coal seam during the pump test in the Masters coal seam.

Response KM 8

This comment is addressed in comment 19 from Muthu Kuchanur.

Comment KM 9

Appendix D6, 6. What effect would a leaking pump have on the results of the pump test in the Masters coal seam?

Response KM 9

This comment is assumed to originate from the note on page Addendum D6-8-30. This note is in reference to activities that occurred immediately after the pumping test was shut off. The pump used for the pumping test did not have a foot valve. Therefore, after the pump was shut off, water in the discharge pipe immediately began to drain back into the well. The pump and piping was pulled out of the well as fast as possible and not all of the water in the pipe drained back into the well. However, the personnel conducting the pumping test were concerned that the water draining into the well would result in a rapid rise in the water level in the well and wanted to note it for the record on the field data sheet. It is estimated that less than 2 gallons of water actually drained out of the line into the well while the pump was being pulled which would result in a water level rise in the well of less than 0.25 foot. Given that the water level recovery in the well was very rapid immediately upon cessation of the pumping test (approximately 2 feet in the first ten minutes after the pumping test ended) and the early time recovery data was largely ignored for the purposes of doing the aquifer characterization evaluations, the leaking pump would not have had an impact on the results of the pumping test.

Comment KM 10

Appendix D6, 7. Please make sure all maps that are stamped are also signed and dated by the engineer, as required by regulation.

Response KM 10

All maps that are stamped will be signed and dated by the engineer as required by law. This does not include digital versions. The digital copies have been provided for WDEQ review. The hard copy is the official copy.

Comment MK 29

Appendix D6-Hydrology, Section D6.1.2 Drainage Basin Description, 3. On Page D6-2 it is stated that Slater Creek is an ephemeral stream. Aerial imagery shows a riparian area with trees and subirrigation occurring along much of the channel. PEM wetlands are also present as documented in Appendix D10. It would seem that an ephemeral stream may not be able to support these features. Please provide the justification why Slater Creek is considered an ephemeral stream, and that the stream does not contain

intermittent characteristics where it is not below the local water table for a portion of the year. (MDK)

Response MK 29

Please see response to DM2.

Comment MK 30

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 4. The USGS operated a peak flow gage on Slater Creek from 1967 to 1981 (Station No. 06299900, http://nwis.waterdata.usgs.gov/wy/nwis/inventory/?site_no=06299900&agency_cd=USGS). The gage was located just downstream of the proposed permit boundary near the confluence with the Tongue River. Please incorporate the annual peak flow data from this station into the permit application to illustrate the range of peak flows that might be expected from Slater Creek. (MDK)

Response MK 30

The text and Tables D6.1-2 and D6.1-3 have been revised to include peak flow data for USGS Station No. 06299900.

Comment MK 31

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 5. Some of the U.S. Army Corps of Engineers references cited in the text (2000, 2001) do not appear in the References Section (Section D6.3). Please add these to the references list. (MDK)

Response MK 31

The text edits have been made as requested.

Comment MK 32

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 6. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section D6.3. (MDK)

Response MK 32

The text edits have been made as requested.

Comment MK 33

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 7. Please explain in the text if the existing impoundments (stock reservoirs, old mine pits, etc.) in both the Slater Creek and Hidden Water Creek drainages were considered in the routing functions for

the HEC-HMS runoff estimates. These features would likely have an effect on attenuating peak flows. (MDK)

Response MK 33

The text has been revised to clarify the impoundments are not included the HEC-HMS model. As described, peak flow estimates should be conservatively high without attenuation of storm events by impoundments.

Comment MK 34

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 8. As the text states on Page D6-5, the HEC-HMS runoff estimates in Table D6.1-7 are higher than the Miller (2003) equation estimates. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) equation estimates.

The Miller (2003) equation for this region used, in part, data from the USGS peak flow gage on Slater Creek, so it would seem that the Miller (2003) estimates may be more reasonable. For example, compared to the HEC-HMS estimates, the 15-year record from the peak flow gage on Slater Creek would not register at anything greater than a five-year event. Furthermore, the May 18, 1978 event on Slater Creek resulted in a peak flow of 1,100 cfs, which according to the HEC-HMS estimates would only be around a 2-year event. USGS studies have shown that the May 1978 flood event was estimated to be a 100-year event on some parts of the Tongue River in this area (http://pubs.usgs.gov/pp/1244/report.pdf). (MDK)

Response MK 34

A discussion in the text has been included that speaks to why the HEC-HMS results are higher than the Miller results. Additionally, a discussion acknowledges the report by the USGS on the May 1978 flood. The Miller analysis does appear to more closely estimate the peak flowrates for flood events for the short data record on Slater Creek. However, hydraulic calculations will continue to use the HEC-HMS results because of the conservative results and the ease in comparing to the postmining hydrologic environment. HEC-HMS provides a way to change the properties of the drainage basins to reflect what will be present postmining, and the comparison between the premining and postmining HEC-HMS models quantifies the magnitude of the impact the Brook Mine will have on the hydrologic balance.

Comment MK 35

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 9. Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

Response MK 35

The locations of the surface water monitoring sites have been reported to the quarter-quarter, which is an adequate level of accuracy to report the monitoring locations.

Comment MK 36

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations,10. On Page D6-8, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

Response MK 36

The text has been revised as requested.

Comment MK 37

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 11. On Page D6-8, second paragraph, it states that increased E.Coli from samples collected in 2006 were attributable to high flows in May-June 2010. Were the samples also collected in 2010 and not 2006? Please revise this sentence. (MDK)

Response MK 37

The sentence was revised to read more clearly. The sentence was saying that samples taken in 2010 experienced an increase in E.Coli bacteria compared to the samples collected in 2006.

Comment MK 38

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 12. On Page D6-8, second paragraph, it would be informative to add that, in addition to the SCCD, other entities such as the Big Horn Mine, USGS, and WDEQ/WQD have collected water quality data on the Tongue River and Goose Creek near the proposed mine. It may also be informative to mention that sections of the Tongue River in the vicinity of the proposed mine are on the State's 303(d) list since certain uses are not supported due to impaired water quality. Goose Creek has also been on the 303(d) list in the past and a TMDL has been prepared. Information can be found at: http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/ and http://deq.wyoming.gov/wqd/tmdl/. (MDK)

Response MK 38

The text has been revised as requested. Refer to Section D6.1.5.1.

Comment MK 39

Appendix D6-Hydrology, Section D6.1.5.2 Surface Water Quantity, 13. The Big Horn Mine (WDEQ/LQD Permit 213) operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. This station was located approximately ¼ mile upstream from station SM578415-SW-1 that was installed by the Brook Mine. The LQD Hydrology Database contains mean daily flow data from this station from 1982 to 1997, although several years are missing data. Baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request or a more complete dataset may be available if requested from the Big Horn Mine. (MDK)

Response MK 39

Please see response to DM 2 and MK 30.

Comment MK 40

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 14. Please briefly discuss in the text the water quality results from Slater Creek in the context of WQD Surface Water Quality Standards for Class 3B waters (see Chapter 1 of WQD Rules and Regulations). This would reveal whether or not designated uses were being met prior to mining. The two samples from Slater Creek indicate no exceedences of Class 3B criteria, indicating uses are supported. (MDK)

Response MK 40

The text has been updated as requested.

Comment MK 41

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 15. It is understood that water was not flowing in Hidden Water Creek so the applicant could not collect a sample for baseline purposes. However, as previously mentioned, the Big Horn Mine operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. The LQD Hydrology Database contains nine water quality samples collected at this site from 1979 to 1989. Baseline characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request. (MDK)

Response MK 41

Request for information is pending. No update to the permit has occurred at this time in response to this comment.

Comment MK 42

Appendix D6-Hydrology, Section D6.1.5.4 Sediment Transport, 16. This section would be enhanced by including data from a single sediment sample collected on Slater Creek at USGS Station No. 06299900 (peak flow gage previously discussed in Comment No. 4). This sample was collected in June 1967 at a flow of 18 cfs. The TSS was 11,600 mg/L and the suspended sediment discharge was 564 tons/day. (MDK)

Response MK 42

The text has been revised to include the additional sediment sample as requested.

Comment MK 43

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 17. A rating curve developed using only the Manning equation will provide only a rough estimate of flows given the uncertainty in the Manning's roughness coefficient. It is recommended that direct discharge measurements also be taken over time to help evaluate the rating curves developed for the four monitoring sites. (MDK)

Response MK 43

The rating curves were developed for ephemeral streams that flow infrequently enough that water measurements cannot be taken at regular intervals. Manning's equation provides a reasonable and widely accepted mathematic approximation of stream flow rates.

Comment MK 44

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 18. Given the uncertainty in the Manning equation, the estimated flow rates provided in Table D6-3 and Attachment D6-5-A (Rating Tables) are reported at much too high a level of precision to be meaningful. Depending on the magnitude of the flow estimate, there should be only one or two significant figures provided. For example, 0.29 cfs = 0.3 cfs and 3,584.38 cfs = 3,600 cfs. Please revise these tables. (MDK)

Response MK 44

Summary Table D6-3 has been revised to engineering precision (no more than three significant figures). The values in Attachment D6-5-A are essentially raw data that are being reported to that magnitude to show the validity of calculations and to aid in curve development. Being raw data, the values were not revised from those previously reported.

Comment Muk 9

Appendix D6, Section D6.2.1 Regional Hydrogeology, 9. Page D6-12 states, "The potential groundwater in the formation as capable of yielding small quantities of water

for domestic and stock use". Please consider providing a range of estimates for well yields based on literature review or from the baseline data collected by the Brook Mine. (MK)

Response Muk 9

The text has been revised to indicate that coal is the only regional shallow aquifer that has a sufficient quantity of water to support domestic and stock use.

Comment Muk 10

Appendix D6, Section D6.2.1 Regional Hydrogeology, 10. The description in this section discusses only about the Fort Union formation. Please provide a description of the overlying and underlying water-bearing formations (aquifers) and describe their hydrogeologic characteristics (flow direction, gradients, aquifer properties, general outcrop locations) on a regional context. It is noted that some of the overlying formations may be dry or discontinuous within the mine permit boundary. (MK)

Response Muk 10

Section D6.2.1 has been updated as requested.

Comment Muk 11

Appendix D6, Section D6.2.1 Regional Hydrogeology, 11. Page D6-12 states, "The overburden is comprised of sand lenses, clinker and alluvial that have the potential of water bearing bodies. Due to the topography in this area, the valley cut through these deposits. Therefore, they are discontinuous and would not hold large quantities of water." It is noted that they are discontinuous and would not hold large quantities of water. Please provide additional justification for this statement by using the hydrogeologic data collected by the Brook Mine including any reference to the interpreted extent of dry zones based on drill holes, monitor wells and other applicable data. (MK)

Response Muk 11

Section D6.2.1.1 has been updated as requested.

Comment Muk 12

Appendix D6, Section D6.2.1 Regional Hydrogeology, 12. Please clarify if there were groundwater springs or seeps observed in the areas within or adjacent to the mine permit boundary. Include a discussion (or reference) on the surface water - groundwater interactions.(MK)

Response Muk 12

Section D6.2.2.5 has been updated as requested.

Comment Muk 13

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 13. Page D6-13 states, "No monitoring wells were completed in the overburden or interburden as no water was found in these units during drilling operations". This information is critical in demonstrating the overlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (both overburden and interburden) and their depths that were used to make this determination. (MK)

Response Muk 13

Section D6.2.2.1 has been updated as requested.

Comment Muk 14

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 14. Page D6-13 states, "Also one well 578409-MST-UB showed the presence of water in the underburden, while all the other wells drilled into the underburden were dry and therefore not completed as wells." Similar to the previous comment, this information is critical in demonstrating the underlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (underburden) and their depths that were used to make this determination. (MK)

Response Muk 14

Please see response to Muk 13.

Comment Muk 15

Appendix D6, Section D6.2.2.2 Aquifer Tests, 15. Page D6-15 states, "Alluvial materials were also not analyzed during the aquifer testing." The alluvial aquifer materials are one of the key factors in determining any impacts caused by mining to the alluvial aquifer. Alluvial aquifer tests will be helpful in understanding any surface water – groundwater interactions. Please provide justification for not conducting any aquifer tests in the alluvial wells. (MK)

Response Muk 15

The text in Section D6.2.2.2 has been updated.

Comment Muk 16

Appendix D6, Section D6.2.2.2 Aquifer Tests, 16. Please provide justification for not observing the groundwater level responses in the alluvial aquifer during the two aquifer tests conducted by Brook mine. (MK)

Response Muk 16

No alluvial material was present in immediate vicinity of the clusters used for the pumping tests, hence there was no alluvial aquifer to monitor. Hidden water creek located to the east of the tested well cluster would be potentially the nearest location of alluvial material, however as noted in Appendix D11 the fill material in Hidden Water Creek is more colluvial than alluvial.

In addition, as shown on the well completion summary logs in Addendum D6-7, multiple claystone intervals are located between the Carney Coal and the surface at the well cluster where the pumping tests were conducted. The top of the Carney Coal is approximately 90 feet below ground surface at the cluster well location which is approximately 50 feet below the level of any colluvial/alluvial deposits in Hidden Water Creek. Similarly, the potentiometric head in the Carney coal is some 50 feet below the level of the colluvial/alluvial deposits in Hidden Water Creek and if there were a direct hydraulic connection, there would be no water in the Hidden Water Creek colluvium/alluvium. Given the confining intervals between and the significant difference in potentiometric head between the Carney Coal and the Hidden Water Creek colluvium/alluvium, additional shallow monitoring above the Carney Coal was not necessary.

Comment Muk 17

Appendix D6, Section D6.2.2.2 Aquifer Tests, 17. Page D6-16 states, "A report of these tests can be found in Addendum D6-8 and summary tabulation of the aquifer test results is included in Table D6.2.2". Please consider including a comparison of these estimated aquifer properties with the aquifer tests conducted in other similar coal seams in the Powder River Basin (Example: Bighorn Mine). Given the number of tests conducted by the mine, this will increase the robustness of the reported estimates from the two aquifer tests. (MK)

Response Muk 17

As requested aquifer test results from Big Horn Coal Company and from the Youngs Creek Mine were added to the text.

Comment Muk 18

Appendix D6, Section D6.2.2.2 Aquifer Tests, It is noted that the aquifer tests were conducted for ~640 minutes. Will an increased aquifer test duration change the observed lack of interaction between the coal seams and the underburden? Please clarify with a brief description. (MK)

Response Muk 18

Given the head differences between the static water levels in the Carney Coal, Masters Coal, and the underburden it is unlikely that additional pumping would have resulted

in any impacts to the water levels in the underburden. As shown on Table D6-2, (page Addendum D6-8-13) the initial water level in the Carney Coal was approximately 11.5 feet higher than the water level in the Masters Coal and the initial water level in the Masters Coal was approximately 9 feet higher than the initial water level in the underburden well. If there were a hydrologic connection between the aquifers, it is likely that the water levels in the aquifers would have already come into equilibrium.

Comment Muk 19

Appendix D6, Section D6.2.2.2 Aquifer Tests, 19. The referenced Addendum D6-8, Table D6-2 shows an increase in water levels in two of the Carney coal seam observation wells during the Masters coal seam well pumping test. Please provide an explanation for this increase in water levels during the aquifer test. (Noordbergum effect?). (MK)

Response Muk 19

Upon review of the raw data collected during the pumping test it was noted that the drawdowns reported in Tables D6-2 and D6-3 were incorrectly reported. Replacement tables are included with this round of comment responses. As shown on the updated version of Table D6-2, the water level in both Carney observation wells (CRN-1 and CRN-OB) increased by 0.23 feet during the Masters coal pumping test. While the Noordbergum effect or other natural phenomena such as earth tides could have potentially influenced the water levels in adjacent aquifers during the pumping test, the increase in water levels can be largely attributed to barometric pressure changes. Water levels in the Carney observation wells were monitored using hand held electric lines and there were no adjustments for barometric pressure reported in Table D6-2. No site specific barometric data was collected during the pumping test period. However, to evaluate how barometric pressure changes may have impacted water levels in the wells, barometric data from the automatic weather observing station (AWOS) at the Sheridan County airport was obtained from the National Oceanic and Atmospheric Administration (NOAA) database. Barometric data from the Sheridan County Airport AWOS site was compared to water level measurements in Attachment D6-8-K. The data in Attachment D6-8-K demonstrates a clear correlation between barometric pressure and water level variations in the Carney coal monitor wells during the Masters coal pumping test. Generally over the course of the Masters coal pumping test the barometric pressure went down (roughly 0.31 feet). A decrease in the barometric pressure is expected to result in an increase in water levels in a confined aquifer like the Carney coal aquifer which is what was observed.

Similar increases in water levels were also noted in the Masters Coal observation wells (MST-1 and MST-OB) during the Carney pumping test as noted on Table D6-3. Attachment D6-8-K demonstrates a clear correlation between decreasing barometric pressure and rising water levels in the Masters coal observation wells during the Carney Pumping test. In addition, during the Carney coal pumping test, water levels

in the Masters coal observation wells were still recovering from drawdowns induced during the Masters coal pumping test which may also have contributed to rising water levels in the Masters coal. The increase in water level measured in the Masters coal observation wells is attributed to a combination of continuing water level recovery and barometric effects.

Only very minor water level variations in the Masters underburden well (MST-UB) were noted during both pumping tests. As shown on the well completion form in Addendum D6-7, (Page D6-7-8) MST-UB was completed in an interval that was predominately claystone and the estimated yield is less than 2 gpm. Essentially the strata in which MST-UB is completed is more of an aquitard than an aquifer. As a result, it takes a lot longer for the water levels in the well to adjust to changing atmospheric pressure because water does not enter or discharge from the formation very fast. The lack of barometric responses in the MST-UB are attributed to the fact that the low yielding aquitard in which the well is completed has a lower barometric efficiency than the wells completed in the coal aquifers.

Vented transducers utilized to monitor water levels in the both the pumping and adjacent monitor wells during each pumping test, automatically compensated for the barometric pressure effects. Therefore, barometric pressure effects did not affect the aquifer analyses that were developed based on the pumping test data.

Comment Muk 20

Appendix D6, Section D6.2.2.2 Aquifer Tests, 20. Please provide a discussion (or reference) on the role of faults in the results of aquifer tests. (MK)

Response Muk 20

As noted in Addendum D6-8, (page D6-8-9) no hydrologic boundary conditions were observed in the pumping test data. As can be seen on Exhibit D6.2-2, the 578409 well cluster is located approximately 2,100 feet south and east of the nearest mapped fault. Since neither the Carney nor the Masters coal seams are very robust aquifers and have low transmissivity values, it is not surprising that the fault would not influence the pumping test results. For example, using Theis drawdown equations and the aquifer characteristics measured in the Masters coal (transmissivity of 3.2 ft^2/day, storitivity of 0.00025, and a pumping rate of 0.5 gpm) it is estimated that it would take over 70 days of continuous pumping for a water level response greater than 0.5ft to be observed 2,000 feet away. Therefore the likelihood that the faults would have influenced the pumping test results is very low.

Comment Muk 21

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 21. Please provide some additional discussion on the premining potentiometric surface maps, including

ranges of estimated hydraulic gradients and groundwater velocity in the different coal seams/aquifers. (MK)

Response Muk 21

As requested, additional discussion on the hydraulic gradients and groundwater velocity in the coal seams were added to Section D6.2.2.4.

Comment Muk 22

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 22. Please provide a discussion (or reference) on the hydrologic effects of any adjacent operations (including past coal mining activity by historic mines and Bighorn mine) on the premining information and data. (MK)

Response Muk 22

The last paragraph in Section D6.2.2.4 describes how CBNG production has affected water levels in the eastern side of the permit area. The drawdowns resulting from CBNG production have occurred since any historic coal mining activity and have superseded any drawdowns that may have occurred due to historic mining. Therefore, no lingering hydrologic effects from past coal mining activities are present. The text in the last paragraph in Section D6.2.2.4 has been updated to describe how CBNG impacts have superseded any impacts from historic coal mining activities.

Comment Muk 23

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 23. This section provides a good discussion on the recharge areas. However, please clarify if there are any discharges from the coal seams within the permit boundary. (MK)

Response Muk 23

Within the permit boundary there are no discharges from the coal seams with the possible exception of the Carney coal on the far west side of the permit area. As shown on Exhibit D6.2-3, the Carney coal outcrops in the far western side of the permit area along the ridge tops but has been eroded away in the stream valleys. As a result, the Carney coal is perched with no real source of recharge and is generally dry. However, on the down dip side of the outcrop the coal may discharge within the permit if there is water in the coal seam to discharge. As shown on Figures MP-3-4.7-1 and MP-3-4.7-2 it was determined during the groundwater modeling efforts that most of the Carney coal within the far western side of the permit area was dry. Therefore, there is minimal (if any) discharge from the Carney coal within the permit area. Section D6.2.2.5 has been updated to clarify where discharges from coal seams may occur within the permit boundary.

Comment Muk 24

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 24. Please provide a range of estimates for recharge from precipitation to the aquifers within the permit boundary. Also, provide a discussion if this is the primary recharge mechanism for the aquifers within the permit boundary. (MK)

Response Muk 24

The estimated recharge rates from precipitation are summarized in Section 4.2.2 of Addendum MP-3. Addendum MP-3 describes recharge within the permit area in more detail than Section D6.2.2.5. A reference to MP-3 was added in Section D6.2.2.5.

Comment Muk 25

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 25. Consider providing a description of the soil properties within the permit boundary and the use of these percent soil distributions in the discussion of infiltration within the permit boundary. (MK)

Response Muk 25

The soil properties within the permit boundary are described in detail within Appendix D7. While different soil types are expected to have variable infiltration rates, the only infiltration rate that is significant for the coal aquifers is the infiltration rate assigned to the strata near the outcrop of the coal seams. Throughout the permit area the strata overlying the coal aquifer are generally dry. Therefore the primary source of recharge occurs at the outcrops. Scoria, in particular, plays a significant role in recharge of the coal seams because it usually occurs near the coal outcrop. Because of its highly permeable characteristics most of the precipitation that falls on the scoria infiltrates into the scoria where it either infiltrates into the coal or discharges along a seep line at the base of the scoria. As noted in the response to BJ Kristiansen's comment number 57, ash material between the base of the scoria and the coal seams sometimes limits how much of the water in the scoria actually comes into direct contact with the coal. Nevertheless, because a large percentage of precipitation falling on the scoria actually infiltrates into it, the scoria does provide a consistent water source for recharge into the coal outcrops. As noted in Addendum MP-3 Section 4.2.2 the scoria areas were delineated and assigned their own recharge zone because they do play a significant role in recharging the coal seams. Within the permit area, there are several locations where the coal seams outcrop as well. These outcrop areas were also assigned their own recharge zone because they also have a hydrologic connection to the coals. Since the strata overlying the coal seams to be mined in the Brook Mine are generally dry, the recharge component from the overburden to the coal is very low away from the outcrop areas. Because of the limited hydrologic interaction between

the recharge at the surface and the coal in areas away from the outcrop, site specific changes in the recharge rates based on soil type will not impact the coal aquifers. For this reason additional analysis of the infiltration properties of the soils within the permit area represents a level of detail that is not necessary to describe the hydrologic impacts to the coal aquifers from the proposed mining operations.

Comment Muk 26

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 26. Page D6-18 states, "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-8". Please revise this statement to reference the correct addendum - Addendum D6-9. (MK)

Response Muk 26

The text has been updated to read "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-9".

Comment Muk 27

Appendix D6, Section D6.2.3 Baseline Water Quality, 27. Page D6-20 states, "A piper diagram of the groundwater wells with measured values is presented in Figure D6.2-1. Please provide a discussion on the water quality types observed at each aquifer (Example: Is the water quality type variable within an aquifer? If yes, explain the potential reasons for this observed variability) based on the piper diagram. (MK)

Response Muk 27

Section D6.2.3 has been updated as requested.

Comment Muk 28

Appendix D6, Section D6.2.3 Baseline Water Quality, 28. Page D6-20 states, "The constituents that most frequently exceed the standard concentration limitations are ammonia, TDS, sulfate and manganese". Please clarify if these constituents exceed the Chapter 8 standards at *all* the monitor wells. (MK)

Response Muk 28

Please refer to the Tables D6.2-8 thru D6.2-17 for exceedances of water quality based on Chapter 8 standards. Based on the tables, the concentrations are not exceeded at all monitor wells. No text edits were made in response to this comment.

Comment Muk 29

Appendix D6, Section D6.2.4 Groundwater Rights, 29. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Cheyenne copy of the TFN does not have a sheet separator and a tab for Appendix E2 in the Adjudication volume. Please provide a sheet separator and tab for Appendix E2. (MK)

Response Muk 29

Refer to Comment DM3. Groundwater rights are provided in Appendix B of the Adjudication Volume. This text edit has been made in Section D6.2.4.

Comment Muk 30

Appendix D6, Section D6.2.4 Groundwater Rights, 30. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Please provide a summary discussion/statistics on (i) total number of water rights, (ii) number of wells, (iii) aquifer, (iv) permitted water use and other relevant summary statistics. (MK)

Response Muk 30

Groundwater rights are listed in Appendix B of the Adjudication Volume. All of the aforementioned information is listed for each water right. Due to the constantly changing nature of water rights, a summary table is difficult to construct, and due to summary statistics not being required by WDEQ regulation, a summary statistics table has not been prepared.

Comment Muk 31

Appendix D6, Section D6.2.4 Groundwater Rights, 31. Please provide a discussion (or reference) on the premine groundwater use (including the uses reported to SEO) within the permit boundary and the adjacent areas. (MK)

Response Muk 31

The premine groundwater uses as reported to the SEO within the permit boundary and the adjacent 3 miles are listed with each individual water right in Appendix B of the Adjudication Volume.

Appendix D7

Comment DS 6

Appendix D7, Exhibit D7.3.-1 was compared with Exhibit MP.1-1. As required, it appears that the soil sampling was concentrated in areas where surface disturbance is to be expected. Please provide the contour interval on the soils map. For ease of review and to prevent misinterpretation, however, the map showing sampling locations should also clearly show the locations of proposed surface disturbances instead of providing these details on separate maps which may or may not present differing scale distances.

Response DS 6

The disturbance boundary can be found on Figure D7.1-1 and as the reviewer noted on Exhibit MP.1-1. No revision to exhibit D7.3-1 has occurred in response to this comment.

Comment DS 7

Appendix D7, Page D7-4. The second paragraph of this page contains text that should be deleted. It states "If for whatever reason overall sampling intensity…..was determined to not be enough, it is proposed that any additional sampling be deferred and included a stipulation of a future pre-stripping soil assessment program." The Mine Plan and Reclamation Plan soils handling and replacement is contingent on adequate baseline sampling of the proposed area that will be affected by mining operations (topsoil balance and stockpile location planning and bond calculation). Therefore, baseline sampling for soils must be adequate prior to approval of any permit application. Please remove the inappropriate language from the Appendix D7 text. If future changes to the Mine Plan require additional soil sampling the issue will be addressed at that time.

Response DS 7

As requested, the second sentence of the second paragraph on page D7-4 has been deleted.

Comment DS 8

Appendix D7, Page D7-9. Text appears in this section that upon NRCS declaration of prime farmlands occurring in the permit area, a letter will be provided to the DEQ. A letter from the NRCS has been received and inserted in the permit declaring no prime farmlands to exist. The text, therefore, is not appropriate and should be removed.

Response DS 8

As requested, the sentence about prime farmland (the last sentence of the first full paragraph on page D7-9) has been deleted. A new reference, citing the letter received

on October 31, 2015 (negative determination of prime farmland on Ramaco permit area) has been inserted on page D7-9 and the new reference has been added to the list of references on page D7-33.

Comment DS 9

Appendix D7, WS § 35-11-415(b)(iii) and the Coal Rules, Chapter 4, Section (c)(ix) state that if topsoil is virtually nonexistent or is not capable of sustaining vegetation then subsoil or a selected spoil material may be used as a topsoil or subsoil supplement. Additionally, due to the proximity of this mine to the Tongue River, a Class 2AB stream, limits for chemical contaminants will be imposed on discharges from the permit. Therefore, for areas where unsuitable or marginal topsoil chemistry is located (e.g. Wibaux channery loam, sample R13), an alternative soil replacement material should be identified and used in reclamation. Such a commitment must also be provided in the Mine Plan and Reclamation Plan to provide evidence that such issues that could affect the condition of reclamation and/or lead to off-site impacts will be addressed.

Response DS 9

No "alternate soil replacement material" is necessary for areas of Wibaux channery loam (Map Unit Wx). The lower soil material below 8 inches of Wibaux (any "C" horizon soil substratum below 8 inches, where existent) was not recommended for salvage and would be grouped with the overburden spoil for placement purposes. This lower material had an excessive volume of hard coarse fragments (>35%) and, based on one of the three Wibaux sample sites (R13), an "unsuitable" EC and SAR value for the 8 to 15 inch depth, EC=12.8 and SAR=17.3. Two new sentences, indicating no soil salvage of Wibaux below 8 inches in depth, has been added to the soils report on page D7-26, one sentence each for Map Unit Wx and Map Unit Wx-RO. Furthermore, the amount of suitable soil available for salvage across the entire proposed disturbance area is not limiting, with a calculated weight-average of 20.2 inches. Therefore, additional "alternate soil replacement material" is not necessary.

Comment DS 10

Appendix D7, The description of Map Unit G (Bauxson Loam, sample R-19) does not show marginal selenium that occurs between 22 – 48 inch depth range which could affect the salvage depth and may require special handling of the marginally suitable subsoil.

Response DS 10

Two new sentences have been added to the last paragraph on page D7-21 stating the presence of "marginal" rated Selenium values for lower material of Bauxson loam (Map Unit G) sample site R19. Strictly speaking, "marginal" rated soil material is not

"unsuitable" and does not need to be specially handled. This lower Bauxson material has been recommended for salvage as "Subsoil", not "Topsoil'.

Appendix D8

Comment JJ 1

Appendix D8, 1. Please update the permit boundaries so that they are the same on Exhibit D8. 2-1 and Addendum D8 Map 1. I note specifically that lands should not be included within the permit boundary south of the interstate and that Section 10 TWN57N RNG85W displays different boundaries along the far west edge of the permit; it appears that the section lines are skewed between the two maps. The Addendum D8 Map 1 also is missing a sizeable amount of lands located in Section 21 TWN54N RNG84W which are included within the permit boundary of the Adjudication Exhibit 1 map. While comparing the maps I find that the maps display the same information in slightly different formats, please explain the necessity for two individual maps and at a minimum make them consistent against one another.

Response JJ 1

Baseline vegetation assessment maps have been updated to include the correct permit boundary. The discrepancy in the permit boundary is attributed to the difference in graphical representation between a USGS quad system and a PLSS system. The USGS quad system is now depicted. Exhibit D8.2-1 is a summary map for this Appendix and future updates made to this Appendix. This map will change throughout the life of the mine as future changes are incorporated. Addendum D8 Map 1 is for this Addendum and will not change throughout the life of the mine.

Comment JJ 2

Appendix D8, 2. Why does the study area not include all lands within the proposed permit boundary?

Response JJ 2

Portions of the proposed Brook Mine permit area not included within the study area were added during an October 2014 permit boundary change following completion of the baseline vegetation study. Additional studies were not conducted in these areas due to the limited size and similarity to areas within the study area. Section D8-1.1, page D8-1-5 text has been updated to explain the exclusion of these areas.

Comment JJ 3

Appendix D8, 3. The acreage displayed on Table D8.2-1 should equal that of the land permitted on the Form 11. The Form 11 displays 4,548.8 acres while the table shows 4,581.7 acres a difference of 32.9 acres. Please update either the Form 11 or Table

D8.2-1 to show the true permit acreage as it relates to the vegetation communities. Upon further review I find that Table D8-2 located on page Addendum D8-1-41 exhibits the proper acreages in relation to the Form 11, thus the values represented there may be more accurately displayed in Table D8.2-1.

Response JJ 3

Total acreage of the permit area is 4,548.8 acres as illustrated in Form 11 and Table D8-2. Table D8.2-1 has been updated to reflect the correct acreage.

Comment JJ 4

Appendix D8, 4. Table D8.2-1 states there are 56 acres of agricultural lands; however, I am unable to locate Agricultural lands north of the interstate. Please, discuss and edit the values to display true acreages in relation to the proposed permit boundary. (See comment 3 for more clarification and another table for utilization to update values.)

Response JJ 4

Agricultural Lands within the permit area total 4.5 acres and are located in Section 21 TWN54N RNG84W. Table D8.2-1 has been updated to reflect the correct acreage of Agricultural Lands and other vegetation communities within the permit boundary.

Comment SP 3

Appendix D-8 Vegetation Baseline, Page D8-3. Section D8.1.7. Guideline 2 is a non coal guideline. Please revise this sentence to reference the equation shown in Section D8-1.2.9 Sample Adequacy.

Response SP 3

Changed as requested. Additionally, Appendix D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8.1.1, page D8-1 and Section D8.3, page D8-4. Addendum D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8-1.2, page D8-1-5 and Section D8-1.9, page D8-1-38. Reference to Guideline 2 was removed from Section D8-1.2.9, page D8-1-12.

Comment SP 4

Appendix D-8 Vegetation Baseline, Page D8-4. Section D8.1.8. Please revise the second sentence to, "The EXREFA is all of the unaffected area for each native vegetation community."

Response SP 4

Changed as requested.

Comment SP 5

Appendix D-8 Vegetation Baseline, Page D8-1-8. Section D8-1.2.4. The last sentence in this section states that no sample locations occurred within the Brook Mine Permit Area. AG-13, 14, 17 and 25 are shown on Addendum: D8, Map 1 inside the permit area. Please correct this statement or the permit boundary on the Map.

Response SP 5

Baseline vegetation assessment maps have been updated to include correct permit boundary which illustrates AG-13, 14,17, and 25 are not located within the permit boundary.

Comment SP 6

Appendix D-8 Vegetation Baseline, Page D8-1-11. Section D8-1.2.8. The last sentence of the first paragraph should be revised to, "Sample adequacy was not required for species diversity and composition."

Response SP 6

Changed as requested.

Appendix D9

Comment DM 4

Appendix D9-Wildlife, Page D9-3 states that when a sage grouse confirmation letter is provided by WG&F, it will be provided to DEQ. It appears that the confirmation letter is already part of the package (Page D9-E3). Please reference the location of the letter.

Response DM 4

Page D9-3 was revised to reference Page D9-E3 as the location of the letter.

Comment WGF 1

(Appendix D9) , We recommend this report become part of the annual reporting which will ensue throughout the operation of the mine.

Response WGF 1

Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the sections of the Mine Plan where the annual wildlife report commitments are contained.

Comment WGF 2

(Appendix D9), We suggest coordinating with the USFWS regarding raptor mitigation as needed through the mining process.

Response WGF 2

The commitments to coordinate with the USFWS regarding raptors as well as T&E and other species of federal concern are provided in Section MP.18, Addendum MP-8 and Addendum MP-9 of the Mine Plan. Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references these discussions.

Comment WGF 3

(Appendix D9), We recommend mining reclamation practices consider providing suitable habitat for existing wildlife within the specifications required by DEQ-LQD.

Response WGF 3

The commitments to reclaim wildlife habitats are provided in the Reclamation Plan in Section RP.7 Wildlife Restoration. Discussion was added at the end of Addendum D9 - 1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the Reclamation Plan.

Appendix D10

Comment BJ 63

EXHIBITS, Addendum D10, The permit boundary layer on all of the exhibits covering the aquatic resource boundaries is incorrect. Please correct the permit boundary layers.

Response BJ 63

Aquatic resource inventory maps have been updated to include the correct permit boundary.

Comment DM 5

Appendix D10-Wetlands, D10-1.4 – Please include a copy of the letter requesting concurrence and jurisdictional determination sent to the ACOE At the end of the text, and reference the letter in the text.

Response DM 5

BKS Environmental Associates, Inc., on behalf of RAMACO, requested concurrence and jurisdictional determination from the USACE on May 29, 2015. A copy of the

letter sent to the USACE has been included as Attachment D10-F. Section D10-4, page D10-10 text has been updated to reflect submittal of USACE request.

Comment MK 45

Appendix D10-Wetlands, Section D10.2 Results, 19. The text may want to state when (what date) RAMACO requested the jurisdictional determination from the USACE, and include this request letter as an Addendum to Appendix D10. This would provide documentation that the request was submitted, as receipt of the USACE determination may lag behind the LQD permitting process. (MDK)

Response MK 45

See response to DM5.

Appendix D11

Comment BJ 26

Appendix D11, Alluvial Valley Floor, Section D11.1, RAMACO has requested LQD to make a determination on the nature of the drainages as potential AVF within the permit boundary as well as within ½ mile of the permit boundary. This would then entail analysis of the following drainages (distances are approximations): • Hidden water Creek – all (4 mi.)

• East Fork Earley Creek – lower 1 mile

• Slater Creek – lower 3 miles

• Tongue River – ½ mi. east of Interstate 90 and 4 mi. west of Interstate 90 at the Acme exit.

Prior to such a declaration, LQD staff will have to perform a variety of assessments designed to assist us in making a declarative statement about AVF classification. An AVF declaration will be made after in-depth study of the drainages. Such investigation will consist of, but not be limited to:

1. Field evaluation of the geomorphic and lithologic character of the drainages in question;

2. Determination of the agricultural characteristics of the stream course;

3. Examination of available bore hole logs that can be used to characterize the subsurface materials beneath the valley floor;

4. Determination of groundwater and surface water characteristics, both quantitative and qualitative, within the drainages in question;

5. Other evaluation processes that may be deemed necessary should initial findings warrant further, in-depth analyses.

Response BJ 26

Revised D11 text throughout to expand discussion on the drainages mentioned above. Incorporated previous AVF studies into Appendix D11. Information satisfying each statement can be found in the following locations as well as many other locations throughout the document:

1. Borehole logs provided in Addendum D11-3. Hidden Water Creek test pits dug by Big Horn Mine and discussed in Section D11.3 "Stream Laid Deposits."
2. Agricultural characteristics of the stream courses are discussed in Sections D11.4.2, D11.4.3, and D11.5, in particular.
3. Bore hole logs are provided in Addendum D11-3. Additional test pit and borehole information was analyzed from the Big Horn Mine Permit No. 213.
4. Groundwater and surface water characteristics are discussed extensively in Appendix D6. Potential impacts to surface water and groundwater are discussed in the Mine Plan. The water resources are generally discussed in Section D11.4.
5. Additional research has been incorporated from the Big Horn Mine Permit No. 213. Corrections and reevaluations of the AVF study have been made throughout Appendix D11.

Comment BJ 27

Appendix D11, Alluvial Valley Floor, Addendum D11-3, Some of the borehole and well logs indicate a damp or wet interval encountered during drilling. Was an attempt made to allow wet materials to produce water prior to continuation of the hole or was water noted after adding another drill steel and lowering the kelly to begin the next 20 feet of hole? Typically, after the steel has been added and the compressor is engaged, a small amount of water can be air-lifted before the rotary table begins to turn. If so, are there field notes indicating water was observed during the connection?

Response BJ 27

It is standard procedure during drilling operations to provide wet or damp intervals an opportunity to produce water. If the intervals had produced water, this would have been noted in the drilling logs provided in Addendum D11-3. There are no other separate field notes that would provide additional information. No changes to the text were made.

COMMENT MK 1

Appendix D11-AVF, Section D11.1 Introduction, 1. In the second paragraph on Page D11-1, the possible impacts of the proposed mining operation on the Tongue River

AVF are dismissed because the area is planned for facilities level disturbance only. However, the groundwater model (Mine Plan Addendum MP-3) predicts drawdown in the Tongue River alluvium, thereby possibly affecting the AVF. As discussed in subsequent comments, additional analysis and monitoring is needed to comply with LQD Coal Rules and Regulations regarding AVFs. (MDK)

RESPONSE MK 1

Revised text to reference Mine Plan Section MP.6 concerning the Brook Mine's effect on the Tongue River AVF.

COMMENT MK 2

Appendix D11-AVF, Section D11.2 Purpose and Scope, 2. On Page D11-2, please change "Wyoming Reclamation Act" to "Wyoming Environmental Quality Act". (MDK)

RESPONSE MK 2

Revised text to state "Wyoming Environmental Quality Act."

COMMENT MK 3

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 3. For identification of unconsolidated stream laid deposits, LQD Guideline No. 9 (AVF) lists two items that may be used to positively identify unconsolidated streamlaid deposits: (1) channel bars, splays, abandoned meanders, modern flood plains, or terraces, and (2) bedload or washload sediment deposited or transported in a nonbedrock channel bottom. Presumably, item (2) would be met at the streams identified within the AVF study area. However, the permit application does not address whether the channels contain geomorphic features from item (1). Please address in the text whether channel bars, splays, abandoned meanders, modern flood plains, or terraces are observed within the streams within the AVF study area. (MDK)

RESPONSE MK 3

Revised text to discuss the lack of channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs in the Hidden Water Creek, Slater Creek, East Fork Earley Creek, and Earley Creek valleys.

COMMENT MK 4

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 4. On Page D11-5, the conclusion that the materials in Hidden Water Creek valley do not meet the definition of unconsolidated streamlaid deposits, is in conflict with the conclusion from the Big Horn Mine Permit. The Big Horn Mine Permit (Appendix D6, Pages D6-151 to D6-158) describes the evaluation of unconsolidated streamlaid deposits on lower Hidden Water Creek. The permit states: "The conclusion verified from the pit observations is that

these deposits are unconsolidated and stream laid. Small isolated patches of colluvium or bedrock can be found throughout the alluvial deposits, but these characteristics do not exclude the deposit from being stream laid." Please evaluate the data and findings from the Big Horn Mine Permit before a conclusion is drawn about the absence of unconsolidated streamlaid deposits on Hidden Water Creek. (MDK)

RESPONSE MK 4

Revised text to discuss the findings of the Big Horn Mine from test pits in the Hidden Water Creek valley. Additionally, Exhibit D11.3-1 was revised to show the locations of the Big Horn Mine test pits in Hidden Water Creek in relation to both the Brook Mine permit area and the Big Horn Mine permit area. Added the Big Horn Mine Permit State Decision Document (SDD) 213-T2 to Addendum D11-2.

COMMENT MK 5

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 5. The Big Horn Mine Permit also describes subirrigation and flood irrigation studies on lower Hidden Water Creek and concludes: "Due to the lack of subirrigation and extremely low potential for flood irrigation, Hidden Water Creek is not an alluvial valley floor." Although this is in the approved mine permit, it does not appear that an explicit AVF determination for Hidden Water Creek was ever issued by the LQD, and the AVF findings in the SDDs for the Big Horn Mine Permit do not mention Hidden Water Creek. The Brook Mine Permit application should incorporate these previous AVF studies on Hidden Water Creek into Appendix D11. (MDK)

RESPONSE MK 5

See response to comment MK 4. Additionally, while the Big Horn Mine State Decision Documents do not mention Hidden Water Creek, the SDD 213-T2 states that "No other drainages are of significant size or lack the stream laid deposits necessary to be an Alluvial Valley floor within the renewal and/or amendment areas." Hidden Water Creek is located within the renewal area and was not included within the originally declared AVF area. Although it was not mentioned by name, it has been declared not to be an AVF within the Big Horn Permit Area.This SDD has been added to Addendum D11-2 and discussion added to the text in Section D11.3.

COMMENT MK 6

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 6. On Page D11-6 it is stated the three monitor wells were installed along the thalweg of Slater Creek. The transects in Exhibit D11.3-2 show that two of the wells (578513-AL and 578418-AL) are not along the thalweg but are rather upgradient of the channel. Please revise this description in the text. (MDK)

RESPONSE MK 6

Revised text to more accurately state that the monitor wells are along or near the thalweg.

COMMENT MK 7

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 7. It appears that from Exhibit D11.1-1 that subirrigation is occurring on Earley Creek within the AVF study area. Please explain why subirrigation was not mapped on Earley Creek. (MDK)

RESPONSE MK 7

Revised Exhibit D11.1-1 to show potentially subirrigated lands on Earley Creek. The text was revised in Section D11.4.2 to reflect that subirrigation potentially occurs along Earley Creek.

COMMENT MK 8

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 8. On Page D11-6, second paragraph, the alluvial/colluvial potentiometric surface is dismissed as a source of subirrigation along Slater Creek. However, the other hydrologic processes responsible for the subirrigation are not identified. Please discuss in the text why subirrigation is occurring along Slater Creek. (MDK)

RESPONSE MK 8

Revised text to discuss the presence of burn areas overlying residual coal ash bands that serve as aquacludes which prevent water from entering or escaping the coal below.

COMMENT MK 9

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 9. The cross-sections in Exhibit D11-3-2 would be improved if the active channel and any floodplains or terraces were shown. A description of the materials in the active channel bottom would also help identify unconsolidated streamlaid deposits. (MDK)

RESPONSE MK 9

Revised Exhibit D11.3-2 to show the 2-year, 24-hour flood inundation area and the location of the active channel. Data regarding the materials in the active channel bottom are presented in the borehole logs in Addendum D11-3.

COMMENT MK 10

Exhibit D11.4-1, the extent of irrigated lands shown in Sections 2 and 11 along Slater Creek may not be correct. According to the summary for the Hart Brothers Ditches

water right (permit 1317) in the SEO database, the land being irrigated under the water right has decreased to 23 acres:

> THIS FACILITY IS MADE UP OF TWO DITCHES. THE WEST DITCH HAVING A POINT OF DIVERSION IN LOT 2 AND THE EAST DITCH HAVING A POINT OF DIVERSION IN THE SENE OF SECTION 3, T57N, R85W. T57N, AND 58N, R85W HAS BEEN DEPENDENTLY RESURVEYED. REQUEST FROM PADLOCK RANCH TO ELIMINATE 67 ACRES AS FOLLOWS: 32 ACRES IN THE SWSW OF SECTION 2 - 30 ACRES IN THE NENW AND 5 ACRES IN THE NWNW OF SECTION 11 ALL IN T57N, R85W, RECEIVED AND GRANTED. REQUEST OF ELIMINATION AND PROOF OF OWNERSHIP FILED IN MISCELLANEOUS NOTICES. ADJUDICATED WITH H.H. WILLIAMS AS APPROPRIATOR. PERMIT RECORD REFLECTS SOURCE AS SLATER CREEK AND WATER STORED IN THE HART BROTHERS RESERVOIR, P60R, XR7825A, HOWEVER CERTIFICATE RECORD REFLECTS .91 CFS FOR THE IRRIGATION OF 64 ACRES. BOC PETITION II 89-4-2 BY PADLOCK RANCH WAS GRANTED TO ISSUE AMENDED CERTIFICATE C77/290A TO REDESCRIBE LANDS WITHOUT CHANGING LAND TOTALS AND TO CHANGE POINT OF DIVERSION FROM THE RECORD POINT IN THE NWNE AND SENE OF SECTION 3, 57N, R85W AND PARTIAL MEANS OF CONVEYANCE FOR 41 ACRES (.59 CFS) TO THE WILLIAMS DITCH, P8710D, C77/289A DIVERTING WATER FROM SLATER CREEK IN THE SESW OF SECTION 34, T58N, R85W AS RECORDED IN ORDER RECORD BOOK 36, PAGES 385-390 AND RECEIVED ON CD3/578A. THIS LEAVES 23 ACRES STILL IRRIGATED UNDER THIS PERMIT. LANDS SHOWN BELOW AS "AME" AND "ELI" ARE THOSE ORIGINALLY DESCRIBED UNDER THIS DITCH.

Please clarify the irrigated acreage status for the Hart Brothers Ditches water right with the SEO and revise Exhibit D11.4-1 accordingly. (MDK)

RESPONSE MK 10

Exhibit D11.4-1 was revised to more accurately capture irrigated lands on Slater Creek in Sections 2 and 11 of Township 57 North, Range 85 West.

COMMENT MK 11

Appendix D11-AVF, Section D11.4.4 Water Quality, 11. On Page D11-7, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

RESPONSE MK 11

Removed text referencing State of Montana water quality standards.

COMMENT MK 12

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 12. On Page D11-8, second paragraph, it states that Exhibit D11.1-1 shows that sufficient water supply does not exist for consistent agricultural practices in East Fork Earley Creek. However, Exhibit D11.4.1 shows a point of diversion for Earley Creek Ditch No. 1 and several areas of irrigated lands less than 40 acres in East Fork Earley Creek. As documented in Addendum D11-4, there is an adjudicated water right for irrigation in this location. So there may be sufficient water supply for consistent agricultural practices. The text needs to further expand on this discussion of East Fork Earley Creek since there is an adjudicated water right for irrigation. (MDK)

RESPONSE MK 12

Revised text to include the Earley Creek Ditch No. 1 water right, but explained that subirrigation must not be prevalent in East Fork Earley Creek because no culvert or other conveyance structure is present beneath I-90. If subirrigation was prevalent and without a conveyance structure beneath I-90, substantial amounts of water would back up against the interstate.

COMMENT MK 13

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 13. On Page D11-8, last paragraph, it states that the hay meadows along Slater Creek in Sections 2 and 11 are not within the boundaries of subirrigation or natural flood irrigation.

> (a) The areas symbolized as irrigated lands in Exhibit D11.4-1 do not necessarily correspond to hay meadows, as the imagery shows hay meadows in the SWNE, SENE, and NESE of Section 11, and the NWSW of Section 12. The hay meadows appear to correspond with the area mapped as "AG" in the Vegetation Map (Exhibit D8.2-1) in Addendum D8.
>
> (b) The irrigated area shown in Exhibit D11.4-1 near the Landen Ditch does overlap with subirrigation mapped in Exhibit D11.1-1.

Please re-evaluate the area of hay meadows along Slater Creek and revise the text accordingly. Comments No. 15 and 16 below also relate to this issue. (MDK)

RESPONSE MK 13

The text was revised in Section D11.5 to reflect the presence of limited hay meadows and overlapping of irrigation with subirrigation on the upper reaches of Slater Creek in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West. Exhibit D11.4-1 was revised to show irrigation in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West.

COMMENT MK 14

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, On Page D11-8, last paragraph, it states that, besides Hart Bros Ditches, the remaining portion of the Slater Creek valley does not contain SEO water rights. This is not the case as Exhibit D11.4-1 shows Landen Ditch in the NENW of Section 11. This water right (P11695) does not appear in Addendum D11-4. Please revise the text and add this water right to Addendum D11-4. (MDK)

RESPONSE MK 14

The text was revised in Section D11.5 to discuss the Landen Ditch water right (P11695). A copy of the Landen Ditch water right was added to Addendum D11-4.

COMMENT MK 15

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 15. The irrigated acreage for the Landen Ditch water right appears to be 18 acres for one point of use and 22 acres for a second point of use. Please add these areas to Exhibit D11.4-1. (MDK)

RESPONSE MK 15

Exhibit D11.4-1 was revised to more accurately reflect irrigated lands in the vicinity of the Landen Ditch.

COMMENT MK 16

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 16. The Hall Ditch (SEO Permit 5195), mapped in Section 11 of Exhibit D11.4.1, apparently provides irrigation water for hayfields in the NESE of Section 11 (30 acres) and the NWSW of Section 12 (22 acres). This water right does not appear in Addendum D11-4. Please add this water right to the Addendum and add the irrigated acreages to Exhibit D11.4-1. (MDK)

RESPONSE MK 16

A copy of the Hall Ditch water right (SEO Permit 5195) was added to Addendum D11-4. Exhibit D11.4-1 was revised to depict irrigated lands in Section 12, Township 57 North, Range 85 West. The text in Section D11.5 was revised to discuss the Hall Ditch water right.

COMMENT MK 17

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 17. Portions of Earley Creek and East Fork Earley Creek are within the AVF study area yet the permit application does not attempt to conclude if these streams contain AVFs. Presumably, the LQD will need to make an AVF finding on these streams. (MDK)

RESPONSE MK 17

See response to Comment BJ 26. Additional discussion has been added to aid WDEQ in the AVF findings of East Fork Earley Creek and Earley Creek. Both valleys are upstream of mining activities proposed by RAMACO such that no material damages are expected to either valley.

COMMENT MK 18

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 18. The first bullet for Slater Creek on Page D11-9 dismisses the positive identification of unconsolidated stream laid deposits because a layer of colluvial material was found over alluvial material. However, as stated in Appendix D5 on Page D5-8 and Page D5-9, sub-rounding of the clinker present in the cuttings suggests water driven deposition of limited extent. Also, as discussed in Comment No. 3, the application did not evaluate unconsolidated streamlaid deposits in a manner that is consistent with identification criteria listed in LQD Guideline No. 9. The application has not provided sufficient evidence that unconsolidated stream laid deposits are not present along Slater Creek. (MDK)

RESPONSE MK 18

See response to Comment MK 3. The discussion on the Slater Creek valley has been further expanded to include the absence of unconsolidated stream laid deposits such as channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs. Exhibit D11.3-1 clearly indicates the presence of undifferentiated alluvium and colluvium (Qac) in the Slater Creek valley.

COMMENT MK 19

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 19. The third bullet on Page D11-9 for Slater Creek should be clarified that the width of natural flood irrigation in the valley is generally insufficient to provide for economic agricultural practices. However, economic agricultural practices clearly occur immediately upstream of the proposed mine permit boundary because of artificial flood irrigation of hayfields adjacent to the channel. These practices are documented by existing water rights that are approximately 100 years old. Please revise this discussion. (MDK)

RESPONSE MK 19

The text in Section D11.6 of Slater Creek's third bullet was revised to include the irrigated hayfield upstream of the permit boundary.

COMMENT MK 20

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 20. The fifth bullet for Hidden Water Creek on Page D11-9 seems to dismiss the positive identification of

unconsolidated stream laid deposits because of colluvial material with shallow bedrock. However, as previously noted, this conflict with information in the Big Horn Mine permit concerning unconsolidated stream laid deposits on Hidden Water Creek. (MDK)

RESPONSE MK 20

Refer to response of Comment MK 4. The Big Horn Mine permit boundary has been added to Exhibit D11.1-1. The text in Section D11.6 has been updated to include a summary of the discussion stating that the Big Horn Coal Permit No. 213-T2 SDD determined the limits of the AVF, and no portion of Hidden Water Creek was determined as being AVF.

COMMENT MK 21

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, Although the LQD has not yet issued its formal finding, the segment of the Tongue River adjacent to the proposed permit area, which was not declared under previous LQD findings, likely contains an AVF.

> (a) If this AVF is significant to farming, the applicant must comply with LQD Coal Rules and Regulations Chapter 3, Section 2(d)(ii) and demonstrate that the proposed mining operations will not materially damage the quantity and quality of water that supplies the Tongue River AVF. The absence of direct mining on the Tongue River AVF does not relieve the requirement of assessing the probable hydrologic impacts of the proposed operation to the AVF, particularly since the groundwater model in Mine Plan Addendum MP-3 predicts drawdown in the Tongue River alluvium. (MDK)
>
> (b) Regardless of the significance to farming, the applicant must also maintain and/or restore the essential hydrologic functions of the Tongue River AVF. The applicant must therefore identify the essential hydrologic functions of the Tongue River AVF and either (1) provide an analysis that the proposed operation will not hamper the essential hydrologic functions, or (2) demonstrate that the essential hydrologic functions will be restored. The essential hydrologic functions for another part of the Tongue River AVF are described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27), so this may be a good starting point to consider. (MDK)
>
> (c) A monitoring system is also required to demonstrate the essential hydrologic functions are maintained, as per LQD Coal Rules and Regulations, Chapter 5, Section 3(b)(ii). Since the groundwater model (Mine Plan Addendum MP-3) predicts 2.5 feet of drawdown in the Tongue River alluvium, the monitoring

system may likely contain alluvial monitoring wells and periodic evaluation of color-infrared imagery. (MDK)

RESPONSE MK 21

Revised text as requested. Revised text by adding information regarding the essential hydrologic functions of the declared AVFs (Tongue River and Goose Creek) from the SDD in Addendum D11-2. Also, added portion of text to describe possible monitoring system and plan for the AVFs that may be affected.

COMMENT MK 22

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, 22. The essential hydrologic functions of the adjacent Goose Creek AVF must also be maintained during the proposed mining operation. The application needs to list these functions, as described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27). A monitoring system is also required to demonstrate that the essential hydrologic functions will be maintained. (MDK).

RESPONSE MK 22

See response to comment MK 21.

Mine Plan

Comment BJ 28

Volume 11, Mine Plan, Section MP.1.2.1, pg. MP-4, Tunnel and pillar widths are discussed in general terms. Please approximate a range for the widths, in feet, in the narrative to give context to the discussion.

Response BJ 28

Added text as suggested.

Comment BJ 29

Volume 11, Mine Plan, The fifth sentence, beginning with "To minimize the amount of exposure..." does not make sense. Please rewrite the sentence for clarity.

Response BJ 29

Added text as suggested.

Comment BJ 30

Volume 11, Mine Plan, The narrative also references figure MP.1-3 as a general schematic of the highwall mining operation. The figure depicts significant vertical

highwalls above the mining operation. The text mentions that the highwalls will be vertical where the Masters and Carney converge but the illustration depicts conditions where the coal seams appear to be separated by a considerable thickness of parting. It is our experience that vertical highwalls in the Powder River Basin are unstable and should be discourage wherever possible. What would the maximum thickness of burden approximate where the vertical highwalls will exist? Please include an average on the schematic as has been done for pit width and bench width.

Response BJ 30

The figure has been updated to include the average depths.

Comment BJ 31

Volume 11, Mine Plan, Pages MP-3 and MP-4, These pages describe the highwall mining operation in vague generalities. The narrative states that the continuous miner will advance into the working face to a depth of 2,000 feet. The manufacturer's specifications for the ADDCAR system state that the depth of a cut is 1,600 feet. Is this a discrepancy of 400 feet or is there a difference in mining tools and the ADDCAR system comes with multiple depth capacities. Please clarify.

Response BJ 31

Conversations with ADDCAR representatives indicates that they will be able to extend the range of the highwall mining system so cuts up to 2,000 feet can be achieved.

Comment BJ 32

Volume 11, Mine Plan, A general word of guidance – Ramps are mentioned in the narrative as designed to an 8% grade. The Cat 777 can generally handle this grade fairly well under most conditions. The Mack Titan trucks, however, may be problematic under certain conditions. Entering the pit on the ramp could be difficult for the Mack trucks with pups if the ramp has been watered to control dust. The overburden materials used for ramp systems are generally silty with a clay matrix and overwatering can create slipping hazards for vehicles. A truck with multiple trailers will have difficulty navigating these conditions. A 6% ramp under these situations is strongly advised.

Response BJ 32

Revised text as suggested.

Comment BJ 33

Volume 11, Mine Plan, The narrative describes the tunnel width as variable, depending on the cutting head chosen. Please indicate approximate footages of the tunnel widths. For example, Bucyrus and Joy manufacture continuous miners that

have heads ranging from 11 to 12 feet in width. A mention of those widths would clarify the narrative. Also the protective coal pillars are described but have no dimensions indicated. The pillar width to tunnel width is crucial so an approximation of the remnant pillars width in feet is required. Please include approximate widths for tunnel and pillar widths.

Response BJ 33

See response to Comment BJ 28. The text has been updated as requested.

Comment BJ 34

Volume 11, Mine Plan, Section MP.1.2.2, The dozer push method of overburden removal is not adequately described. Though Figure MP.1-4 does depict the dozer push materials to some extent, the overlapping nature of the multiple lift system can be confusing to some. The narrative on page MP-4 is too brief. Please elaborate further on the dozer push staging and overburden removal. Perhaps an illustration that depicts the dozer removal in stages would be more appropriate. This can be accomplished by creating a series of illustrations rather than only one. Please clarify the methodology.

Response BJ 34

Revised text as requested. Created Figure MP.1-5.

Comment BJ 35

Volume 11, Mine Plan, Section MP.1.4, Pg. MP-5, The last sentence does not make sense. Please rewrite the sentence.

Response BJ 35

Removed last sentence for clarity.

Comment BJ 36

Volume 11, Mine Plan, Section MP.4.2.3, Pg. MP-15, The discussion of temporary topsoil stockpiles describes creating a ring ditch around the topsoil pile if there is a potential for water erosion during the 2 week to 6 month life of the pile. Since the climate is unpredictable and subject to rapid changes, temporary topsoil stockpiles (2 weeks to 6 months) will be required to have ring ditches in all cases with no qualifiers. LQD writes more violations concerning inadequate topsoil practices than any other issue. Rewrite the narrative to indicate that all temporary topsoil stockpiles will have a ring-ditch and berm created for piles having a life of 2 weeks or more. Keep in mind that even a short-lived topsoil stockpile could generate a violation if a sudden rainstorm were to erode the soil and waste it on the surrounding terrain. RAMACO may want to allow for this as well

Response BJ 36

Updated text as requested.

Comment BJ 37

Volume 11, Mine Plan, Section MP.4.3.4, Pg. Mp-17, A swell factor of 16% is being used to convert bank cubic yards to loose cubic yards. The number was generated from information attained from Big Horn Coal (PT213). Where was this information located? Many of the coal mines in the northwestern corner of the Powder River Basin use a swell factor of 13% - 14% since the overburden material is finer grained, with a higher clay content than mines on the eastern margin of the basin. Please cite the use of a 16% swell factor.

Response BJ 37

Revised text as requested. Table MP.4-9 provides typical swell and load factors of materials.

Comment BJ 38

Volume 11, Mine Plan, Section MP.6.1, Pg. MP-39, The second paragraph discusses surface runoff attenuation during mine years 4 and 5. The peak flow rates for precipitation events will be attenuated by the mining trenches that lie perpendicular to the flow in the local drainages. What flow events are expected to be attenuated by the trenches? Will the 2 year, 10 year, or 100 year events be considered as an average event? Please modify the narrative, in general terms, to define which precipitation event will be used when designing the pit drainage plans.

Response BJ 38

Updated text as requested.

Comment BJ 39

Volume 11, Mine Plan, Section MP.8, Pg. MP-47, The narrative mentions that potable water will be hauled to the mine an placed in a cistern. Why is a cistern system being considered for potable water instead of a reverse osmosis unit? The local residents use such systems as do the mines. How large of a cistern will be used for water storage? Please modify the narrative to expand on the rational behind using a cistern.

Response BJ 39

The text has been revised. The final potable water system has not been determined.

Comment BJ 40

Volume 11, Mine Plan, Section MP.9.9, Pg. MP-52, When pre-dug mud pits are to be used for exploration drilling, the topsoil must be protected from contamination by removal and stockpiling. The pit location must be stripped to the base of the soil with an areal extent that allows the pit materials to be stacked as spoil without encroaching on native surface. Reclamation shall occur in a manner that will best restore the surface to its pre-disturbance condition. These contingencies need to be better described in the narrative. Please modify the text to reflect the aforementioned conditions.

Response BJ 40

Revised text as suggested.

Comment BJ 41

Volume 11, Mine Plan, Section MP.18, Pg. MP-68, The second paragraph discusses the speed limits that will be set on haulroads to protect wildlife. Approximately what speed limits will be used?

Response BJ 41

Updated text with a 45 MPH Speed Limit.

Comment BJ 42

Volume 11, Mine Plan, Section MP.20, Pg. MP-69, The brief description of underground mining should state that no "conventional" underground mining will occur. Highwall coal recovery is an underground mining technique, but no personnel work underground. Thus the mining is modified underground mining.

Response BJ 42

Revised text as requested.

Comment BJ 43

Volume 11, Mine Plan, Section MP.24, Pg. MP-70, The word "Operation" is misspelled in the title (OPERTATION).

Response BJ 43

Revised text as requested.

Comment BJ 44

Volume 11, Mine Plan, Section MP.25, Pg. MP-71, The second paragraph, third sentence, discusses requiring additional permitting. The word "additional" is misspelled (addidtional).

Response BJ 44

Revised text as requested.

Comment BJ 45

Volume 11, Mine Plan, TABLE MP.1-1, The total disturbance should read 895 acres, not 775. Please correct the table.

Response BJ 45

Revised text as requested.

Comment BJ 46

Volume 11, Mine Plan, FIGURE MP.1-3, The average width of the pit floor and safety bench have average widths indicated on the drawing. Please insert the average heights of the vertical highwalls in these situations.

Response BJ 46

Revised Figure MP.1-3 requested.

Comment BJ 47

Volume 11, Mine Plan, FIGURE MP.1-4, The cross section, as drawn, is confusing. It would appear that dozer pushed, loose material significantly exceeds the bank material available in the highwall. The figure is not drawn to scale but a more accurate attempt to represent dirt volumes would be appreciated. Also, the cross section itself does not make sense in the way that operational steps are illustrated. A series of cross sections over time would be much more beneficial to define the appearance of the dozer push. Please modify the figure accordingly. A sample of an idealized schematic is attached. It is volumetrically accurate.

Response BJ 47

Figure MP.1-4 has been updated to add clarity.

Comment BJ 48

Volume 11, Mine Plan, FIGURE MP.4-3, Pg. MP-F7, What is the narrow, vertical rectangle located in the center of the coal stockpile coming from the stacker?

Response BJ 48

The figure MP.4-3 has been updated to remove the rectangle

Comment BJ 49

Volume 11, Mine Plan, Addendum MP-3, Pg. MP-3-2, The introductory paragraph states that the Brook Mine is approximately 6 miles northwest of Sheridan, Wyoming. However, in earlier narrative, the mine is said to be 6 miles south of the Montana border and 8 miles northwest of Sheridan. This passage is found in the Land Use Appendix D1-1. The distances should be uniform in all instances throughout the narrative.

Response BJ 49

Revised text as requested.

Comment BJ 50

Volume 11, Mine Plan, Addendum MP-3, Section 2.3, Figures 2.3-1 and 2.3-2 show the potentiometric surfaces for the Carney and Masters coal beds. The contours daylight and appear to be in mid-air over the Slater Creek drainage. Please adjust the contours so they terminate at the outcrop.

Response BJ 50

Revised Figures 2.3-1 and 2.3-2 in Addendum MP-3-17 as requested.

Comment BJ 51

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-3, The second to last paragraph indicates that the depth of the penetration by the continuous miner will be 2,000 feet. Is this an approximation since the listed depth for the ADDCAR device is 1,600 feet. Please clarify the discrepancy.

Response BJ 51

Based on communication with ADDCAR's representative 2,000 ft penetration is achievable. Generally, users of the ADDCAR system encounter increasing depth of cover with greater penetrations requiring wider web pillar between holes. The loss in recovery due to the wider pillars potentially negates any production gain from increased penetration.

Comment BJ 52

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-4, The discussion in this sections centers around the necessity of maintaining a straight, even cutting depth to prevent pillars from being cut too narrow to hold up the roof material and

allow subsidence. The 1:1 ratio suggested by NIOSH is acceptable as long as roof strength tests bear up (no pun intended) the use of the general guidelines. A small sample of tests have been run on roof and coal rock intervals and those tests have been reported. LQD requests a narrative placed either in this location of the text or other location of RAMACO's choosing that discusses the strength tests results as it pertains to roof stability. Also, a commitment must be made in the document to sample roof material for strength testing for at least one location in every panel that will mined by the continuous miner prior to mining. Our concern rests with the competence of the overlying lithologies and their possibility for subsidence. This has been a problem in this area for decades and care must applied to characterize roof materials accurately.

A sampling plan to test compressive strength above each coal panel must be submitted prior to permit approval.

Response BJ 52

RAMACO must submit and have an approved MSHA Ground Control Plan that contains the strength test and commitments requested. RAMACO will provide this information when it is received and include it in the Subsidence Control Plan.

Comment BJ 53

Volume 11, Mine Plan, Addendum MP-6, Please provide the data used as input for the ARMPS-HWM program.

Response BJ 53

The following input values were used in the ARMPS-HWM programp: compressive strength of coal - 660 psi, rock density - 162 lbs/ft3, abutment angle of 21°

Comment BJ 54

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-2, The scale of the photograph is too large to adequately depict the zones of surface subsidence from the old underground mines. Please blowup the scale to allow for clear visibility of the subsidence.

Response BJ 54

Cardno selected the larger scale to show that subsidence was limited to a small portion of the deep mine and not visible over other areas of the deep mine due its increased depth of cover. See revised figure in revision to Cardno's Subsidence Report

Comment BJ 55

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-3, This figure is very effective. It clearly shows the subsidence evident on the air photo as it correlates to

the old underground map superimposed on it. One problem, though, is that the air photo base needs to be darker, with greater contrast. The photo is a bit washed out and manipulation of the brightness/contrast aspects of the photo would help its visibility greatly. Please recalibrate the photo tonality.

Response BJ 55

See revised figure in revision to Cardno's Subsidence Report

Comment BJ 56

Volume 11, Mine Plan, Addendum MP-8, Section MP-8.5.4, The last sentence in this section indicates that there is no suitable habitat available for the Northern Long-Eared Bat. Does this include the climax Cottonwood Forest along Tongue River? The well developed understory along the river is suitable for Long-eared bat habitation though none have been located in this area. Or does the negation of the existence of the bat only apply to the area in the hills above the river where the mining will occur. Please clarify the area that was considered for potential Long-Eared Bat occurrence.

Response BJ 56

The text was revised to clarify.

Comment BJ 64

EXHIBITS, Mine Plan, Exhibit MP.1-1, The patterns used to depict surface disturbance from year to year are too similar. It is difficult to differentiate between year 0 and year 2, for example. Please recreate the surface disturbance layers to be more unique. The overburden removal sequence map (Exhibit MP.4-4) is a good example.

Response BJ 64

Revised Exhibit MP.1-1 as requested.

Comment DM 6

Mine Plan, MP.3.1.3 – A primary haul road appears to cross the Tongue River using the bridge that is currently in place from previous mine usage. Please discuss any updates needed for that bridge to be adequate for the intended usage.

Response DM 6

The revised primary haul road alignments do not cross this bridge and the use of this bridge for haul trucks and other traffic associated with the mine is not planned. Updated Exhibit MP.3-1.

Comment DM 7

Mine Plan, Exhibit MP4-3 shows Overburden Stockpiles OB-12 and OB-13, and Topsoil Stockpile TS-6 being located directly in the Slater Creek channel, without any mention of redirecting slater creek, or otherwise preventing the hydrologic consequences of damming up the creek with Overburden and Topsoil stockpiles. Please correct.

Response DM 7

Revised Exhibit MP.4-3 as requested with OB-12 and 13 as well as TS-6 moved out of slater creek channel.

Comment DM 8

Mine Plan, MP.7 – Because of the proximity of the planned facilities primarily in T57, R84 Sec.15 to the Tongue River and Goose Creek, I would like to see surface water monitoring upstream of these facilities on Goose Creek and Tongue River, and downstream of these facilities on Tongue River. Please discuss the feasibility of fulfilling this request, with reasoning.

Response DM 8

Revised text as requested. Revise Exhibit MP.7-1 with USGS stream gage location that is within the viewing area.

Comment DS 11

Mine Plan, 11) Depending upon the outcome of required overburden sampling, commitment for special handling of unsuitable overburden will be required to assure that placement of unsuitable materials so as not to hinder plant growth or to adversely affect surface or groundwater quality will be required in the Mine Plan.

Response DS 11

See section MP.4.6.1, fourth paragraph.

Comment DS 12

Mine Plan, 12) Does RAMACO provide a better detailed description of the topsoil salvage and handling process than that discussed in section MP.4.2.1? The description provided is not detailed so as to provide a description of the equipment used, the methods for assuring adequate soil salvage, or whether topsoil and subsoil salvage will follow the recommendations in Appendix D7 for stockpiling topsoil separate from subsoil. (Map Unit A Cambira Loam, Map Unit B Zigweid Loam, Map Unit C Forkwood Loam, Map Unit G Bauxson Loam, Map Unit H Haverdad Loam, Map Unit U Ulm Clay Loam) Please understand that topsoil and subsoil may only be mixed

if both meet Guideline 1 suitability criteria. Please include more detail for topsoil salvage and handling or let the LQD know where the information may be accessed.

Response DS 12

Revised text as requested.

Comment DS 13

Mine Plan, 13) Section MP.4.2.3 all topsoil stockpiles, even those stockpiled temporarily or windrowed at the edge of a disturbance, must be identified by a topsoil sign from initiation of the salvage operation as required under Chapter 4, Section (c)(D) that states that signs must be in place at the time stockpiling is begun. Therefore, the text in the first paragraph of this section stating that signs will not be required must be corrected. Signs will always be required to identify all salvaged topsoil and must be placed on all approaches to the topsoil and no more than 150 feet from the stockpile location.

> a. Additionally, all stockpiled topsoil, even windrowed along the edge of a disturbance, must be protected against wind and runoff erosion, compaction or potentially toxic materials no matter what the longevity designation of the stockpiled material. The Mine Plan must provide a commitment to these requirements.

Response DS 13

Revised text as requested.

Comment DS 14

Mine Plan, 14) Section MP.4.2.4(4.2.1?) does not discuss topsoil salvage during winter months. Salvage during the winter months, especially of shallow soil profiles, is discouraged by the LQD due to a lack of depth control caused by varying depths of permafrost. Please provide discussion concerning this subject.

> a. Even short term and temporary topsoil stockpiles must be identified on maps and the volumes accounted for in annual reports. Several criteria that must be considered are well established for placement of topsoil stockpiles and include:
>
> > i. Construction of stable areas to minimize wind and water erosion
> >
> > ii. Stockpiles will not be placed in areas where runoff water can contribute to the loss of topsoil (side hills or drainages)
> >
> > iii. Stockpiles will not be constructed on unsuitable backfill locations
> >
> > iv. Stockpiles will have associated sediment control established in advance of construction

v. Stockpiles will not be constructed at locations of known cultural or wildlife resources for which protection or mitigation is required.

b. Other topsoil stockpile construction and maintenance considerations include:

i. Stockpiles will be constructed with slopes of 3h:1v or less

ii. Bypass ditches, berms or equivalent may be used to divert runoff around stockpiles

iii. Stockpiles that will remain for less than 1 year may be revegetated or treated with urface roughing methods such as ripping or discing to reduce runoff and wind erosion potential.

Response DS 14

Revised text as requested.

Comment DS 15

Mine Plan, 15) Section MP.4.2.7, page MP 4-5. Aside from operation of soil salvage equipment with the potential for soil contamination due to blown hydraulic hoses or small fuel leaks, the LQD expects not contamination of soil during the mining operation. Contamination of subsoil and overburden is more likely. The LQD recommends that RAMACO re-phrase the section header and text to show petroleum contaminated materials being and not soils.

a. What criteria will RAMACO use to determine if spills require reporting to the DEQ, and what process will be used in spill reporting?

b. What will the operational procedure be for management of the proposed on-site landfarm for contaminated materials, and where will it be located? Will it be identified on the ground by a sign?

Response DS 15

Revised text as requested.

a. See Section MP-4.5.2 of Addendum MP-4
b. See Section MP-4.5.3 of Addendum MP-4

Comment DS 16

Mine Plan, Section MP.4.2.8. Please provide a detailed description for the disposal of empty drums, not just a citation of the EPA Rule which is probably not know by most readers of this public document.

Response DS 16

The EPA Code Federal Regulation cited is public information which may be accessed online or at a public library if the reader desires to know the specifics requirements and steps regarding container disposal.

Comment DS 17

Mine Plan, MP.4.3.1 discusses overburden removal processes. However, little detail is given to explain the actual process for overburden handling. Will the first cut be stockpiled and used to fill the last cut? When special handling is required, which is almost certain given the nature of some overburden and the need for some soil replacement materials, what assurance will be made that poor quality materials will be safely located in the backfill or in separate stockpiles, or that topsoil substitutes will be handled and stored as topsoil in a useful manner as required under Chapter 4, Section 2(b)(x)(A)? Please provide a more detailed overburden handling plan. Perhaps some of these details are observed in later sections. Please provide additional details not provided elsewhere.

Response DS 17

See Sections MP.4.3.5, MP.4.6 and MP.4.7. Revised text as requested.

Comment DS 18

Mine Plan, Section MP.4.3.4. The volumetric analysis shown in Table MP.4-4 and MP.4-5 may change depending on results of required additional overburden sampling and volumetric analysis. If the overburden depth overlying coal changes as a result of additional sampling, the volumetric analysis will also change. If post mining contour changes are necessary due to adjusted swell factors permit revision will probably not be required until the changed PMT exceeds plus or minus 20 feet of the approved at which time a Reclamation Plan revision will be required. This kind of detail should be included in the permit commitments.

Response DS 18

Revised text as requested.

Comment DS 19

Mine Plan, Section MP.4.6.1. The typical overburden sampling protocol as stated in Guideline 1 calls for one sample taken every 40 square acres of the permit area. Overburden sampling for underground mining operations differs from typical coal mine sampling protocols and is stated in the Coal Rules, Chapter 7, Section 1(a)(i)(A) which calls for overburden sampling and characterization on areas where surface operations will cause removal of overburden down to the level of the coal seam. Please

make changes to the text accordingly and perform additional overburden sampling where required.

Response DS 19

Revised text as requested.

Comment DS 20

Mine Plan, Section MP.4.3.5. A statement was made in this section that "Overburden stockpiles will only block ephemeral drainages if runoff control and sediment control measures are made and approved by WDEQ/LQD." Placement of overburden in ephemeral drainages will require a discussion of how water will be diverted around the overburden stockpile to prevent impoundment of water in addition of a discussion of sediment control measures for the stockpile to prevent of-site impacts of erosion down-slope from the stockpile. The LQD recommends that no overburden stockpiles be placed in ephemeral drainages.

Response DS 20

Revised Exhibit MP.4-3.

Comment DS 21

Mine Plan, Tables MP.1-1, MP.1-2 and MP.4-1 must show the actual years for proposed progressions, or the year 1 progression must be tied to a specific year in the Mine Plan text.

Response DS 21

Revised tables as requested. Added note saying that Year 0 corresponds to the year 2016

Comment DS 22

Mine Plan, Tables MP.4-3 and MP.4-5. Topsoil volumes appear to be underestimated in TS- 2, TS-6, TS-10 and TS-11 while underestimating the proposed volume in TS-1. Also overburden volumes appear to be underestimated in OB-4, OB-7, OB-11, OB-14 and OB-15, and overestimated in OB-16, which may affect estimates presented in TableMP.4-4 as well.

Response DS 22

Volumes are estimated based on the stripping volumes and available backfill area with excess material going to and from stock pile for contemporaneous reclamation. No updates will occur in response to this comment.

Comment DS 23

Mine Plan, Exhibit MP.4-2 and MP.4-3 must show the dates (actual years) for the salvage of topsoil and removal of overburden, or year 1 must be tied to an actual year when operations will begin (2016, 2017, etc.). The map or tables in the Mine Plan must provide proposed years and volumes for stockpile construction as well.

Response DS 23

Revised Exhibits as requested. Added note saying that Year 0 corresponds to the year 2016 on all Exhibits with years.

Comment DS 30

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30

Revised Exhibits as requested.

Comment DE 1

Mine Plan, Figure MP.1.2 and page MP-3 – MSHA and best practices may require a safety berm on this safety bench which could require a wider bench. Figure MP.1.2 notes a minimum of 35' but the text on page MP-3 just states the bench will be 35' wide. There is a real possibility this safety bench might be used for light plants so it may need to be wider for access and small vehicle use as well as providing a safety bench.

Response DE 1

Revised text as requested.

Comment DE 2

Mine Plan, Table MP.1-1 – The total disturbance doesn't seem to match the overall disturbance listed for the trench mining and facilities. Please explain or correct.

Response DE 2

Revised table as requested.

Comment DE 3

Mine Plan, Section MP.2.3, page MP-9 – The 1st sentence would be better if it started, "The explosive materials…". The 2nd sentence should replace the word "detonating"

with “explosive”. The 5th sentence in the 2nd paragraph should include cast boosters. The 6th sentence in the 2nd paragraph should discuss storage of emulsions, water gels, and slurries also. This section should also commit to proper signage of the explosive storage area. Please correct.

Response DE 3

Revised text as requested.

Comment DE 4

Mine Plan, Section MP.5.7.5, page MP-34 – The word “of” in the 2nd line of the last paragraph should be “or”. Please correct.

Response DE 4

Revised text as requested.

Comment DE 5

Mine Plan, Section MP.6.1, page MP-39 – The 1st sentence of the 1st full paragraph needs some improvement so it reads properly and makes sense. Please correct.

Response DE 5

Revised text as requested.

Comment DE 6

Mine Plan, Section MP.14.2, page MP-55 – The 2nd paragraph discusses the use of “cast primers”. The term should be “cast boosters” as it doesn’t become a primer until the detonator is added or detonating cord is attached to it. The discussion of priming holes should describe the use of a cast booster and how it is made-up to become a primer, i.e. with detonating cord or a detonator (blasting cap). Please correct.

Response DE 6

Revised text as requested.

Comment DE 7

Mine Plan, Section MP.14.3.2, page MP-56 – In the 2nd line the item “(primer with detonator)” should be changed to “(cast booster with detonator)”. Please correct

Response DE 7

Revised text as requested.

Comment DE 8

Mine Plan, Section MP.14.3.2, page MP-56 – The 2nd paragraph discusses powder factors in coal and overburden and the high end of the ranges is extremely high for the type of rock and coal in this area. RAMACO should eliminate the range and simply state powder factors will be adequate to effectively fragment the overburden and coal.

Response DE 8

Revised text as requested.

Comment DE 9

Mine Plan, Section MP14.3.3, page MP-56 – RAMACO should reword this to say that initiation will be done using non-electric or electric systems, which may include electronic detonators, shock tube detonators, detonating cord, electric detonators or a combination of these. Igniter cord is used to initiate safety fuse and it's highly unlikely that any safety fuse will be used at this mine. Please correct.

Response DE 9

Revised text as requested.

Comment DE 10

Mine Plan, Section MP.14.4, pages MP-56 & 57 – It is probable that emulsions will also be stored on site so it should be mentioned since emulsion/ANFO blends are the most widely used product in wet holes. Please correct.

Response DE 10

Revised text as requested.

Comment DE 11

Mine Plan, Section MP.14.6, pages MP-57 & 58 – Residents who request a pre-blast survey must make the request to the permittee and the Administrator of Wyoming Land Quality Division (LQD). The permittee is responsible for getting the pre-blast survey done and distributed to the person that requested it and the LQD Administrator. Please correct.

Response DE 11

Revised text as requested.

Comment DE 12

Mine Plan, Section MP.14.7, pages MP-58 & 59 – LQD will not approve protecting uninhabited structures (what LQD refers to as engineered structures) at 8.0 inches

per second (ips) of peak particle velocity. LQD would allow a maximum limit of 5.0 ips. RAMACO would have to assure that this limit was not exceeded by the use of a seismograph at these structures on all blasts. RAMACO could apply for a modified scale distance factor to show compliance with this limit of 5.0 ips by submitting a vibration study and doing a regression analysis to show the allowable ppv is not exceeded at a 95% confidence level. However, this will require the vibration study be submitted with seismograph records from shots in the mining area so it cannot be done until after some blasting has been done at the mine. Please correct this text.

Response DE 12

Revised text as requested.

Comment DE 13

Mine Plan, Section MP.14.8.1, page MP-60 – The discussion on typical pattern size should be changed to more general language. Using the parameters given the powder factor used would be approximately 0.16 lbs./CY using ANFO and in the 0.23-0.25 lbs./CY range when shooting an emulsion blend. These powder factors are not high enough to adequately fragment the overburden. Please correct.

Response DE 13

Revised text as requested.

Comment DE 14

Mine Plan, Section MP.14.8.1, page MP-60 – The 2nd paragraph says if water is in the holes a slurry or water gel explosive will be used. Most likely an emulsion/ANFO blend with good water resistance will be used in wet holes and not a slurry or water gel. Please correct.

Response DE 14

Revised text as requested.

Comment DE 15

Mine Plan, Section MP.14.8.1, page MP-60 – The 3rd paragraph discusses the explosive weight per hole and the powder factors. The explosive densities listed are correct but the pounds per hole and powder factors are incorrect. In a 7.875" hole and with a density of ANFO of 0.85 g/cc the pounds/foot of hole is 17.95 lbs. and with 24' of powder column the pounds/hole is 431 lbs., making the powder factor = 0.16 lbs./CY. Similarly using an emulsion blend of 1.32 g/cc the pounds/foot = 27.87 lbs. and the pounds per hole would be 669 lbs. so the powder factor =o.25 lbs./CY. In the 50' hole described with 26' of stemming and 24' of powder the powder distribution is

poor so it would likely lead to blocky material near the top of the bench. Please correct.

Response DE 15

Revised text as requested.

Comment DE 16

Mine Plan, Section MP.14.8.2, page MP-61 – Drilling a 35' x 35' pattern in a 15' thick coal seam with a 7.875" hole and 4.5' of stemming will probably result in excessive flyrock, stemming ejection, high airblast and hard zones between the holes. Expecting to stem 4.5' is not realistic – in the field the blaster is going to try to hold for 4' or 5' of stemming. Again RAMACO discusses using slurry or water gel in wet hole when an emulsion/ANFO blend with high water resistance would probably be used. Please correct. Also the powder factor listed for coal is probably a little high so it would be better to just say that the powder factor will sufficient to fragment the coal for the prime movers. Please correct.

Response DE 16

Revised text as requested.

Comment DE 17

Mine Plan, Section MP.14.10, page MP-63 – The last bullet item says that detonation during electric storms might be a reason for unscheduled blasting. This is confusing because it makes it sound like the operator would shoot during electric storms and the only safe thing to do when an electric storm approaches is clear the pattern and keep everyone a safe distance away until the storm passes. Please correct.

Response DE 17

Revised text as requested.

Comment DE 18

Mine Plan, Addendum MP-7, Blaster's Log – Under the "Holes" heading RAMACO should use "burden" not the term "burden spacing". On the 2nd page the word "signiture" should be changed to "signature". Please correct.

Response DE 18

Revised text as requested.

Comment MK 23

Mine Plan, Section MP.20 Alluvial Valley Floors, The discussion of underground mining in AVFs does not seem necessary given there is no plans for underground mining at the Brook Mine. Furthermore, it is conceivable that circumstances could exist where underground mining of an AVF would not be allowed by the LQD. For example, if the AVF was significant to farming and underground mining of the AVF would result in surface effects such that material damage to the AVF would occur. (MDK)

Response MK 23

While no underground mining is proposed within delineated AVFs, the mine maintains this option. If underground mining is ever planned under the AVF, the appropriate revisions will be made. Revised text as requested.

Comment MK 46

Mine Plan, Section MP.4.1 Mining Sequence, 20. On Exhibit MP.4-1, please attempt to show the areas that would be highwall mined versus surface mined. These layers are currently not found until Exhibit MP.15-1. Alternatively, the text in this Section could specify that the areas to be highwall versus surface mined are shown in Exhibit MP.15-1. (MDK)

Response MK 46

Revised text as requested.

Comment MK 47

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 21. Only Slater Creek and Hidden Water Creek are labeled and shown in Exhibit MP.5-1. In order to better evaluate the Hydrologic Control Plan, please provide labels and locations for the other stream channels, including Tongue River, Goose Creek, East Fork Earley Creek, and the other unnamed channels (as shown on the USGS 24K Quad) on the proposed permit area. (MDK)

Response MK 47

Revised Exhibit MP.5-1 as requested.

Comment MK 48

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 22. Exhibit MP.5-1 shows overburden stockpiles OB-13 and OB-12, as well as topsoil stockpile TS-6, occurring directly over the Slater Creek channel. The Exhibit does not show any diversion ditches to be used in these locations. Please either move the location of the

stockpiles or present a plan to use a diversion to route Slater Creek around the stockpiles. (MDK)

Response MK 48

Revised Exhibit MP.5-1 as requested.

Comment MK 49

Mine Plan, Section MP.5.2 Sedimentation and Wastewater Impoundments, 23. Exhibit MP.5-1 shows the locations of two "sediment basins". Are these considered the same as "sedimentation impoundments", as discussed in this Section? If so, the designs for these two impoundments are not found within the Mine Plan. (MDK)

Response MK 49

The "sediment basins" shown in Exhibit MP.5-1 are not considered the same as the "sediment impoundments(reservoirs)" . Sediment Basins are considered an Alternative Sediment Control Measure and are discussed in Addendum MP-1. As such, the design for these "sediment basins" are not included in the Mine Plan. However, the design criteria and construction standards for "sediment basins" are similar to those discussed within Section MP.5.2 of the Mine Plan. Revised text as requested.

Comment MK 50

Mine Plan, Section MP.5.3 Flood Control, 24. This section discusses flood control reservoirs but it is not mentioned how many flood control reservoirs would be constructed and where their locations would be. Please provide this information to comply with LQD Coal Rules and Regulations, Chapter 2, Section 5(a)(i)(D)(IV). (MDK)

Response MK 50

Revised text as requested.

Comment MK 51

Mine Plan, Section MP.5.4 Diversions, 25. This section mentions permanent diversions, but there are no apparent plans for permanent diversions. Please discuss if permanent diversions are anticipated as part of the mining operation, or if all diversions will be temporary. (MDK)

Response MK 51

Revised text as requested.

Comment MK 52

Mine Plan, Section MP.5.4 Diversions, 26. Exhibit MP.5-1 shows only one diversion ditch for Hidden Water Creek in T57N, R84W, Section 9. Please discuss this particular diversion and its typical design in more detail in Section MP.5.4. (MDK)

Response MK 52

Revised text as requested. Add design exhibit of the Hidden Water diversion ditch.

Comment MK 53

Mine Plan, Section MP.5.5 Culverts, 27. Please provide a brief statement that commits to a periodic culvert inspection and maintenance plan to ensure that culverts will function properly over time. (MDK)

Response MK 53

Revised text as requested.

Comment MK 54

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 28. The first sentence references a sedimentation reservoir. Where is the location of this sedimentation reservoir? Are these the "sediment basins" shown in Exhibit MP.5-1? If not these sedimentation reservoirs need to be added to this Exhibit. (MDK)

Response MK 54

Revised text as requested.

Comment MK 55

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 29. The first paragraph references treating and discharging pit water. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 55

Revised text as requested.

Comment MK 56

Mine Plan, Section MP.6.1 Surface Water, 30. Exhibit MP.1-1 shows surface disturbance directly over a few areas of Slater Creek and Hidden Water Creek. Please identify the source of disturbance in these areas. Direct disturbance of the channel should be avoided unless there is a plan for a diversion to route the stream around the disturbance. (MDK)

Response MK 56

See response to Comment MK 76, 88 and 99. Revised text as requested.

Comment MK 57

Mine Plan, Section MP.6.1 Surface Water, 31. The mining trenches are often discussed with reference to Exhibit MP.1-1. However, the trenches are not shown on this Exhibit. Please add the locations of the trenches to Exhibit MP.1-1. (MDK)

Response MK 57

Revised Exhibit MP.1-1 as requested.

Comment MK 58

Mine Plan, Section MP.6.1 Surface Water, 32. On Page MP-39, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining disturbance will be treated prior to discharge. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 58

Revised text as requested.

Comment MK 59

Mine Plan, Section MP.6.1 Surface Water, 33. Please discuss the diversion ditch for Hidden Water Creek in the first carryover paragraph on Page MP-39. (MDK)

Response MK 59

Revised text as requested. See Hidden Water Creek diversion Exhibit MP.5-2 for further details.

Comment MK 60

Mine Plan, Section MP.6.1 Surface Water, 34. On Page MP-40, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining activities will be treated prior to discharge. Please reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 60

Revised text as requested.

Comment MK 61

Mine Plan, Section MP.6.1 Surface Water, 35. On Page MP-40, there is a sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility". This statement is unclear. Are the impacts to the actual Slater Creek channel or the uplands and other tributaries in the watershed? Is it reduced ground cover and increased soil erodiblity? Please provide a more explicit description of the possible impacts. (MDK)

Response MK 61

See response to Comment MK 56, 76, 88 and 99. Revised text as requested.

Comment MK 62

Mine Plan, Section MP.6.1 Surface Water, 36. Please provide a discussion on whether the proposed mining operation would affect surface water quality such that designated uses would be affected on the major streams on and adjacent to the proposed permit area. (MDK)

Response MK 62

Revised text as requested.

Comment MK 63

Mine Plan, Section MP.6.1 Surface Water, 37. The text describes possible reductions in peak flows and storm volumes. Please describe in the PHC if the proposed mining operation will have any effects on nearby or downstream surface water rights. (MDK)

Response MK 63

Revised text as requested.

Comment MK 64

Mine Plan, Section MP.6.1 Surface Water, 38. Please add a brief statement to the PHC that if it is determined that the mining operation affects a surface water right, that water right would be replaced with a water source of similar quantity and quality as provided by W.S. § 35-11-415(b)(xii). (MDK)

Response MK 64

Revised text as requested.

Comment MK 65

Mine Plan, Section MP.6.1.1 Land Erosion Stability, 39. It is unclear the intent of this section. It seems to be out of place in the mine plan, as it discusses the USLE in the

context of only native and reclaimed conditions. Furthermore, no data other than the K factors are presented in Mine Plan Tables (Table MP.6.1). The Reclamation Plan also does not discuss applying the USLE, so it would seem that Section MP.6.1.1 should be removed unless a USLE analysis is completed of pre- vs during- vs postmine erosion predictions. (MDK)

Response MK 65

Section MP.6.1.1 has been removed.

Comment MK 66

Mine Plan, Section MP.7.1 Surface Water Monitoring, 40. It is unclear why reservoirs will be monitored in the operational monitoring program when these features were not sampled for during baseline characterization. If the reservoirs have the potential to be affected by the mining operation they should be sampled prior to mining with this information presented in Appendix D6. (MDK)

Response MK 66

Revised text as requested.

Comment MK 67

Mine Plan, Section MP.7.1 Surface Water Monitoring, 41. Please add the reservoir monitoring locations listed in Table MP.7-1 to Exhibit MP.7.1. (MDK)

Response MK 67

Revised Exhibit MP.7.1 as requested.

Comment MK 68

Mine Plan, Section MP.7.1 Surface Water Monitoring, 42. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

Response MK 68

See response MK

Comment MK 69

Mine Plan, Section MP.7.1 Surface Water Monitoring, 43. Please identify what type of water quantity data will be generated from the continuous stage monitoring. For example, will mean daily flow rates and/or peak daily flow rates be estimated, as these would likely be submitted to the LQD in the Annual Report? (MDK)

Response MK 69

Revised text as requested.

Comment MK 70

Mine Plan, Section MP.7.1 Surface Water Monitoring, 44. The text in the last paragraph on Page MP-45 states that water quality samples will be collected from a single station using an ISCO automatic sampler. Please identify in the text which station this is. Also, please explain the rationale for using an ISCO sampler at only one of the four stream monitoring sites. (MDK)

Response MK 70

Revised text as requested. The station equipped with the ISCO automatic sampler was the only station equipped with such a device due to the stations location as well as expected flows. Quarterly grab samples taken at stations upstream of mining disturbances will give an accurate representation of water quality entering the permit boundary. Since the station equipped with an automatic sampler is located near the area in which Slater Creek exits the permit boundary, an automatic sampler allows the operator see if the mining activities of the Brook Mine have an impact on the water quality of Slater Creek as the highest chance water quality is affected will occur during precipitation events. An automatic recorder was not installed at the station downstream of disturbances on Hidden Water Creek because the recorded and modeled flows for the drainage are extremely low. No observable flow had been recorded on any surface water station along Hidden Water Creek, despite precipitation events having occurring. As such, any data collected by an automatic sampler on Hidden Water Creek would occur during extreme precipitation events in which the flows through Hidden Water Creek would likely have high turbidity and be an unrealistic representation of the water quality within Hidden Water Creek.

Comment MK 71

Mine Plan, Section MP.7.1 Surface Water Monitoring, 45. The text in the first paragraph on Page MP-46 states that data will be evaluated to determine if any surface water and groundwater interactions exist. It would seem that any interactions should have already been identified during the baseline characterization of the hydrological system on and near the proposed permit area. It does not appear that the permit application discusses surface/groundwater interactions. (MDK)

Response MK 71

Revised text as requested. The monitoring is a continuation of the baseline monitoring sites.

Comment MK 72

Mine Plan, Section MP.8 Water Use, 46. Please state in the text that all water from surface reservoirs or wells will be used under appropriate permits from the State Engineer's Office (SEO). (MDK)

Response MK 72

Revised text as requested.

Comment MK 73

Mine Plan, Section MP.8 Water Use, 47. It is advised that the applicant discuss with the SEO-Interstate Streams Division any implications that water use may have under the Yellowstone River Compact. (MDK)

Response MK 73

Revised text as requested.

Comment MK 74

Mine Plan, Addendum MP-6 Subsidence Control Plan, Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation, 48. The text states that subsidence monitoring would be discontinued if no evidence of subsidence occurred after six months after highwall mining. Please include a clarifying statement that the applicant would remediate subsidence up until bond release is approved, even if the subsidence was detected later than the six months of initial monitoring. (MDK)

Response MK 74

Please see revision to last paragraph of Addendum MP-6

Comment MuK 32

Mine Plan, 32. Please provide an electronic copy of the groundwater model referenced in Addendum MP-3. In addition, please provide the GIS projection coordinate of the model files that will enable the LQD to plot the model results in GIS for the purposes of producing the CHIA (Cumulative Hydrologic Impact Assessment). The LQD review of the model files might potentially generate additional comments, clarifications or questions. (MK)

Response MuK 32

An electronic copy of the groundwater model Will be provided under separate cover. The elements in the model are based on the Wyoming East Central NAD 83 state plane coordinate system. To convert from model Grid to the state plane coordinates the X

offset is 1367387.512 and the Y offset is 1915004.382. There is no rotation from the model grid to the state plane coordinate system.

Comment MuK 33

Mine Plan, MP.1.1 Type of Mine, 33. Page MP-1 states, "Below the Tongue River Member is the Lebo shale member of the Fort Union Formation which contains the Masters Seam (Cardno MM&A, October 2013)." This statement is not consistent with Table D5.3-1, Page D5-T1 and other descriptions in Appendix D5. Table D5.3-1 indicates Masters Coal seam is in the Tongue River Member. Please clarify and make appropriate changes throughout the submittal (Example: MP 4.4). (MK)

Response MuK 33

Revised text as requested.

Comment MuK 34

Mine Plan, MP.1.1 Type of Mine, 34. Major coal seams on the Brook Mine include: Dietz (1,2,3), Monarch, Upper Carney, Lower Carney and Masters.". Dietz (1,2,3) coal seam is not included in the description presented in Section D5.3.3.3, Appendix D5. Please clarify: (i) the seams that will be mined by the Brook Mine and (ii) include the description of all the coals seams as appropriate in Appendix D5 and Appendix D6. (MK)

Response MuK 34

Please refer to Mine Plan Section MP.4.4.1 for targeted coal seams at the Brook Mine.

Comment MuK 35

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, Consider using the groundwater model referenced in Appendix D-3 to provide a description for a range of estimates on anticipated dewatering rates/volumes and groundwater inflows to the mine pit. (MK)

Response MuK 35

The text in Section MP.5.8 is to indicate that water entering the pit from either groundwater or surface water will be controlled using sumps and treated prior to discharge.

Comment MuK 36

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, 36. Please clarify the anticipated effects of the faults on the dewatering plan or groundwater impacts during mining. (MK)

Response MuK 36

Since the water will be collected in a sump, treated, and then discharged, the faults should have no effect.

Comment MuK 37

Mine Plan, MP.5.9 Dewatering Wells, 37. Please provide a brief discussion on the anticipated quality of groundwater removed at various stages of mining. (MK)

Response MuK 37

Revised text as requested.

Comment MuK 38

Mine Plan, MP.5.9 Dewatering Wells, 38. If groundwater is discharged into a stream channel, anticipated discharge flow rate, water quality, and estimated seasonal discharge of the groundwater should be tabulated. The availability and suitability of this water for downstream water users should also be evaluated. Please clarify if this is an expected mechanism to discharge pumped groundwater. (MK)

Response MuK 38

Revised text as requested.

Comment MuK 39

Mine Plan, MP.5.8 Groundwater Rights, Please include a description on any expected degradation of groundwater quality caused by the mining operation (including lateral flow through spoils) in the adjudicated wells. (MK)

Response MuK 39

Revised text as requested.

Comment MuK 40

Mine Plan, MP.6.2.Groundwater, 40. Please provide a brief discussion on any hydrologic effects caused by anticipated changes in recharge to the aquifers during mining. (MK)

Response MuK 40

Revised text as requested.

Comment MuK 41

Mine Plan, MP.6.2.Groundwater, 41. Please provide an assessment of any subsidence effects (Addendum MP-6) on the hydrologic system during operations. (MK)

Response MuK 41

Revised text as requested.

Comment MuK 42

Mine Plan, MP.6.2.Groundwater, 42. Please discuss if there are any expected impacts on groundwater quality caused by subsidence. (MK)

Response MuK 42

Revised text as requested.

Comment MuK 43

Mine Plan, MP.6.3.2 Plan to Mitigate the Impacts on Groundwater, 43. If the quality or quantity of adjudicated water supplies are affected, then an alternative source should be identified as part of the mitigation plan. Please provide a statement to meet this statutory requirement (W.S. § 35-11-415(b)(xii)). (MK)

Response MuK 43

Revised text as requested.

Comment MuK 44

Mine Plan, MP.7.2 Groundwater Monitoring, 44. Please clarify the lack of any shallow monitor wells near Hidden Water Creek, Goose Creek and Tongue River alluvium and if this will be an impediment to completely characterize the groundwater impacts during mining. (MK)

Response MuK 44

Hidded Water Creek has no alluvium ttherefore, no shallow well can be installed. Goose Creek in the area of the permit is through a reclaimed mine area (pre-law) therefore there is not alluvium. As discussed throughout we will not impact the Tongue River Alluvium. RAMACO will add wells in the Tongue River Alluvium.

Comment MuK 45

Mine Plan, MP.7.2 Groundwater Monitoring, 45. Please clarify the possibility of any of the monitor wells shown in Exhibit MP.7-7 being discontinued due to any constraints in the proposed-mine plan (example: mined through). (MK)

Response MuK 45

Revised text as requested.

Comment MuK 46

Mine Plan, MP.8 Water use, 46. Page MP-47 states, "Industrial water will be obtained from groundwater wells or from water collected in sediment and flood control reservoirs." Please clarify if the groundwater wells mentioned in this statement are wells that will be exclusively used as industrial supply wells or if they are same as dewatering wells. (MK)

Response MuK 46

Revised text as requested.

Comment MuK 47

Mine Plan, MP.8 Water use, 47. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a discussion comparing the reported water use by other mines of similar size in the Powder River Basin.

Response MuK 47

No record of reported water use was discussed in the annual reports submitted to WDEQ for several different mines within the Powder River Basin. As such, a comparison was unable to be made.

Comment MuK 48

Mine Plan, MP.8 Water use, 48. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a comparison of this estimated total water use against the various estimated water sources available during mining (Example: from dewatering wells). It will be very helpful to provide a discussion on contingency measures during extreme wet/dry years or if the proposed mine plan does not require extensive dewatering. (MK)

Response MuK 48

RAMACO is currently working to solidify the necessary water right for this water. The sources and associated amounts are in discussions and therefore not presented at this time.

Comment MuK 49

Mine Plan, MP.8 Water use, 49. Please clarify if there is any expected variability in this projected water use (example: is it closely related to the mine plan). (MK)

Response MuK 49

Revised text as requested.

Comment MuK 50

Mine Plan, Addendum MP-3 Groundwater Model, 50. Page Addendum MP-3-19 states, "Since, most of the wells within the modeled domain are stock wells with intermittent pumping and completed in geologic strata below the Masters Coals, they are relatively inconsequential to the groundwater system modeled in this report." Please provide a Figure (or reference) to show these wells, their depths and discuss on why they are hydrogeologically isolated from the effects of the proposed mine. (MK)

Response MuK 50

All the groundwater rights are tabulated within Appendix B of the adjudication volume and Exhibits 5 and 8 in the adjudication volume show the locations of each respective groundwater right. Please note that adjudication Exhibits 5 and 8 include monitor wells in addition to stock and domestic wells so all the wells shown on the exhibits are not necessarily wells that are being used as water supply wells. In fact, almost all the completed water wells shown on Exhibit 5 of the adjudication volume within the Brook Mine permit area are actually monitor wells. The Cross Sections presented in Exhibit 2 of Addendum D5-3 show the depth of the coal seams at various locations within the Brook Mine Permit. For comparison, the depths of each well are listed in the tabulation in Appendix B of the adjudication volume.

The statement on Page MP-3-19 "they (the wells) are relatively inconsequential to the groundwater system modeled in this report" means that the wells are not believed to be significant stressers to the groundwater system because of their relatively low pumpage rates. This statement should not be interpreted to mean that all of the stock and domestic wells in the area are hydrologically isolated from the coals proposed for mining within the Brook Mine Permit area. In fact, Section 4.9 of Addendum MP-3 specifically describes 26 wells that, based on their depths and locations, are likely completed within the coals. The expected impacts to these wells were assessed as part of the modeling exercise. Based on a comparison between the reported depths in the water rights tabulation in Appendix B of the adjudication volume and the geologic cross sections in Addendum D5-3, the other stock and domestic wells in the area were determined to be completed either in the Tongue River alluvium, or deeper strata below the Carney coal and do not have a direct hydrologic connection to the coals proposed for mining in the Brook Mine and were not specifically evaluated in the groundwater model.

Along the eastern edge of the model domain there are a large number of CBM wells and, based on available data presented in the water rights tabulation in Appendix B of the Adjudication volume, these wells are likely pumping water from the Carney and Masters coal seams. The impacts from the CBM wells are described in detail within

later sections of the report. However, the text on page MP-3-19 does not speak to the CBM wells. Minor changes to the text on page Addendum MP-3-19 and additional explanatory text have been added to this page to provide further clarification.

Comment MuK 51

Mine Plan, Addendum MP-3 Groundwater Model, 51. Page Addendum MP-3-20 states, "The faults are significant in lateral extent and form natural no flow boundaries". Please provide a discussion (or refer to a discussion) on how these faults were determined to be no flow boundaries. (MK)

Response MuK 51

Faulting within the permit area was mapped by B.E. Barnum on the USGS Monarch Quadrangle. As noted in Section D5.3.2, Barnum indicates fault displacements on the order of 50 feet within the mine area. Lithologic logs provided in Addendum D-5-3 demonstrate that the dominating lithology in the column is claystone and coal thicknesses are less than 20 feet. This offset geology from faulting results in a claystone hanging or footwall adjacent the coal aquifer and therefore discontinuity of the aquifer and an assumed hydrologic flow boundary.

Comment MuK 52

Mine Plan, Addendum MP-3 Groundwater Model, 52. Please clarify the reason for not estimating vertical hydraulic conductivity of the interburden using an aquifer test. (MK)

Response MuK 52

Response to this comment is partially clarified in responses to MK's Comments 18 and 19 above. During the aquifer test conducted at the 578409 well cluster no response was observed across the interburden, therefore, the vertical hydraulic conductivity of the interbuden was too low to measure in the aquifer test. Furthermore, the static water levels in the Masters and Carney coal seams are different which demonstrates that the hydraulic conductivity of the interburden is very low. Therefore, literature values were utilized and adjusted within reasonable bounds to improve model calibration.

Comment MuK 53

Mine Plan, Addendum MP-3 Groundwater Model, 53. Page Addendum MP-3-25 states, "With no unnatural stresses on the system …" Please provide a discussion of the CBM impacts on the water levels. It appears that the hydrographs presented in Appendix D6 do not show the impacts of CBM. (MK)

Response MuK 53

There are multiple CBM production wells located along the eastern side of the groundwater domain. In order for the CBM producers to be able to produce gas it is necessary to significantly lower the water levels in the coal to release the gas in the coal fractures. CBM production began in this area around 1999. Therefore, it was conservatively assumed that CBM production has already resulted in lowering the water levels in the coal aquifers to the top of the coal aquifer along the eastern edge of the model domain and the general head boundaries were set accordingly to simulate this effect. Even though water level data in the coal aquifer prior to CBM production is limited because of the lack of monitor well data, prior to CBM production, the potentiometric head in the coal was estimated to be significantly higher than the top of coal.

The hydrographs presented in Appendix D6-9 do not show the impacts of CBM because they show water level changes over a one year period roughly 13 years after CBM production began in the area, and if the wells were going to be impacted by CBM, it is likely that they have already been impacted. Please note that the model assumed that CBM production would continue into the future resulting in the water levels in the coal being maintained at unnaturally low levels. Therefore, the model has conservatively estimated the combined impacts from both CBM and the proposed coal mining activities. Currently, a large majority of the CBM wells are being plugged and abandoned which may result in higher than predicted water level recovery rates in the coal aquifer.

Text edits were made to page MP-3-25 to help clarify the discussion.

Comment MuK 54

Mine Plan, Addendum MP-3 Groundwater Model, 54. There are two sub-sections for recharge, Section 2.5.3 and Section 2.6.1. Please clarify/consolidate. (MK)

Response MuK 54

The two subsections have been combined into one subsection under Section 2.6.1

Comment MuK 55

Mine Plan, Addendum MP-3 Groundwater Model, 55. Page Addendum MP-3-26 states, "… drain cells were placed in the model to simulate seeps from the outcrops." Please provide a discussion on the evidence for seeps (or reference) observed during field surveys. Were there any field data collected on the location and flow rates of these seeps? (MK)

Response MuK 55

Evidence of seeps from outcrops can be seen in Color Infared Imagary (CIR), which is included in the permit as Exhibit D11.1-1. The areas of seepage are manifested on the CIR imagery as areas with more vegetation. Evapotranspiration from the vegetation growing along the seep removes all the water before it emanates from the formation into the drainage. Therefore, no measurements of the seepage rate at the outcrops were possible or are available. Additional discussion explaining the need for drain cells within the model is provided in Section D6.2.2. Also, text was added to Section D6.2.2 to clarify that no field flow measurements were available.

Comment MuK 56

Mine Plan, Addendum MP-3 Groundwater Model, 56. Page Addendum MP-3-27 states, "River cells from MODFLOW's river boundary conditions package were placed in the model to simulate the Tongue River and Goose Creek." Please provide a conceptual discussion supported by field observations on the type/nature of interaction of these streams with groundwater (Gaining stream vs. losing stream). (MK)

Response MuK 56

As described in Section 2.3 of MP-3, the dip of the strata in the project area is generally east-southeast into the Powder River Basin and the groundwater flow direction follows this trend regionally. As such, the Tongue River comes into contact with the coal seams of interest near the updip side of the coal seams. Interactions between the surface water and groundwater occur at those points where permeable formations sub-crop into alluvial/surface water bodies. Both the Carney and the Masters coal subcrop under the Tongue River near the western edge of the model domain. Conceptually these subcrops are the only places where the coals would be in contact with the surface water. Section 2.3 of Addendum MP-3 describes the conceptual groundwater flow in some detail.

As described in Addendum MP-3 Section 2.3, the Carney coal is largely dry to the north and west of its subcrop into the Tongue River alluvium and becomes saturated at an elevation just above the elevation where it subcrops beneath the Tongue River alluvium. Therefore it is likely that the Carney Coal would lose water to the Tongue River alluvium. The potentiometric surface in the Masters Coal is roughly the same as the potentiomentric surface of the Tongue River where the Masters coal subcrops beneath it. A review of the steady state groundwater model shows that where the River boundary cells are immediately above the Masters Coal the net effect is that the River boundary cells input approximately 3.2 gpm into the model. Conversely, near the upper and lower Carney Coal/Tongue River outcrops the River cells are taking roughly 0.16 gpm out of the model. Since the coal outcrops occur beneath the Tongue River there is no way to field verify these flows but conceptually they do seem reasonable.

The river boundary cells extend to the bottom of the layer in which they are placed as discussed in response to comment MUK 74 and MUK 84. The River boundary cells were placed in Layer 1 to the confluence of Goose Creek and the Tongue River which extends east of the area where the Carney Coal would be in communication with the Tongue River alluvium. Due to the fact that the River boundary cells extend to the bottom of the layer they do provide a conduit for the River to provide recharge into the Carney Coal even though the River would be physically separated from the coal by multiple zones of low permeability shales. The estimated recharge occurring in this area from the Tongue River to both layers 1 and 2 is approximately 8 gpm. The discharge into the coals is likely conservatively overestimated and not all of the 8 gpm would necessarily end up in the coal as some of it also discharges to layer 1. As such, the model conservatively estimates that up to 11.2 gpm would be discharged from the river to the coals or overburden between the Carney Coal and the Tongue River.

The strata located above the coal seams of interest is generally claystone with low permeability as discussed in MP-3 Section 2.2. Therefore, interaction of groundwater between these units and the Tongue River or Goose Creek is very limited. Within the model domain, the Tongue River Alluvium does have large deciduous trees and other vegetation immediately adjacent to the river. Conceptually, evapotranspiration from the vegetation along the Tongue River would indicate that through the model domain the Tongue River is a losing Stream. Throughout most of the model domain where the Tongue River is present, there low permeability overburden strata between the Tongue River alluvium and the coal seams which hydrologically isolate the Tongue River from both the Masters and the Carney coal seams. Since Goose Creek is located in the eastern portion of the model domain where the coal is significantly below the alluvium and the clay intervals are even thicker, the Goose Creek alluvium is also hydrologically separated from the Masters and Carney Coals. The Goose Creek alluvium would likely see similar losses to evapotranspiration that would be observed in the Tongue River alluvium.

Comment MuK 57

Mine Plan, Addendum MP-3 Groundwater Model, 57. Please provide a discussion on any contribution of groundwater baseflow to the major surface water bodies within the permit boundary. (MK)

Response MuK 57

As described in the response to comment MuK 56, conceptually, very little groundwater base flow from the Carney and Masters coal seams are expected to contribute to the surface water bodies within the permit boundary. The mass balance table provided in response to comment MuK 73 demonstrates that much more water is expected to enter the groundwater system from the surface water bodies (river cells) than is contributed to the surface water bodies from groundwater baseflow.

Comment MuK 58

Mine Plan, Addendum MP-3 Groundwater Model, 58. In section 3.2 MODFLOW Input Files, was aerial recharge used as an input file? Please clarify if evapotranspiration was considered as a discrete input or lumped into net aerial recharge. (MK)

Response MuK 58

Yes, the recharge package was used as an input file. Section 3.2 of Addendum MP-3 was updated to include a discussion of the recharge package. The evapotranspiration (ET) package was not utilized in the model. To address the effects of ET, the recharge rates were adjusted down in proportion to the estimated losses created by ET. Within most of the model domain where evapotranspiration would occur, the low permeability overburden between the surface and the coal seams of interest provide a hydrologic barrier so the evapotranspiration was ignored in these areas.

Comment MuK 59

Mine Plan, Addendum MP-3 Groundwater Model, 59. Page Addendum MP-3-31 states, "Layer 1 – represents the coal overburden". Please clarify if the alluvial aquifer was included in the model. Please provide justification for not considering the alluvial aquifer in the model. (MK)

Response MuK 59

As described in the responses to comments MuK 56 and MuK 57, the only place within the model domain where there is potential for interactions between any alluvial aquifers and the coal seams of interest is where the coal is directly below the Tongue River alluvium or Slater Creek colluvium. Where the coal is in direct contact with alluvium/colluvium, layer 1 (the coal overburden) was assigned a higher vertical hydraulic conductivity to allow the layer to better emulate the alluvial/colluvial aquifer in this location. This zone of higher hydraulic conductivity in layer 1 is depicted on Addendum MP-3 Figure 4.2-1. Groundwater Vistas does not allow discontinuous layers throughout the model domain so this allowed the alluvium/colluvuim to be effectively be modeled without the need to add an additional layer across the top of the entire model domain. This helped to improve the computational efficiency of the model. Since the overburden has a very low hydraulic conductivity and hydrologically separates the coals from the other alluvial/colluvial deposits within a large portion of the model domain, there is no reason to model any additional alluvial/colluvial deposits. To help clarify this comment Figure 4.2-1, was prepared and sections 2.5 and 4.2 of MP-3 have been updated.

Comment MuK 60

Mine Plan, Addendum MP-3 Groundwater Model, 60. Page Addendum MP-3-31 states, "Layer 3- Carney Interburden. This interval is generally of low to very permeability in

the western portion of the Project Area". Please clarify how the areas where Layer 3-Carney Interburden is absent are treated in the groundwater model. (MK)

Response MuK 60

Ground Water vistas does not allow discontinuous layers. Therefore, Layer 3 is continuous across the entire model domain. Where the coal seam coalesces on the east portion of the model, the Layer 3 interburden was modeled as coal by setting hydraulic properties of the layer equivalent to the values of the overlying and underlying coal seams. Additional text has been added to Section 4.2.1 of Addendum MP-3 to further describe how the hydraulic conductivities were assigned to layer 3.

Comment MuK 61

Mine Plan, Addendum MP-3 Groundwater Model, 61. Please include a discussion of the thickness of all model layers. (MK)

Response MuK 61

Addendum MP-3 Section 2.5 describes the thickness of the various coal seams. Additional text has been added to MP-3 Section 4.1 to generally describe the thickness of each layer. Following are the modeled thicknesses for each layer:

- Layer 1-The thickness for this layer varies throughout the model domain. Near the western side of the model the layer is often absent where all the strata geologically younger than the Carney coal has been eroded off. These areas are generally represented as no flow cells in the model. Within the eastern portion of the model Layer 1 can be substantial. In the model the maximum thickness of Layer 1 in the eastern side of the model domain was approximately 1,100 feet.

- Layer 2-The Upper Carney coal was modeled with a constant thickness of 7 feet throughout the model.

- Layer 3-The Carney coal interburden layer varied in thickness from 4 feet up to 15 feet within the active portion of the model.

- Layer 4-The Lower Carney coal was modeled with a constant thickness of 8 feet within the model.

- Layer 5 The Carney/Masters coal interbuden layer varied in thickness from 4 feet up to 107 feet within the model.

- Layer 6-The Masters coal was modeled with a constant thickness of 6 feet within the model.

Comment MuK 62

Mine Plan, Addendum MP-3 Groundwater Model, 62. Please include a justification for not considering the underlying zones beneath the Masters coal seam in the model. (MK)

Response MuK 62

The Masters coal is underlain by the Lebo Shale. The Lebo Shale is a thick (Appendix D5 Section D5.2.3), regional confining interval in the project area as described in Mine Plan Addendum MP-3 Section 2.1. There are no aquifer units identified within the model domain within the Lebo Shale with direct hydrologic connection to any of the elements of the model. Since the Lebo Shale is a regional confining unit, if it had been included in the groundwater model, it would have been assigned hydraulic parameters typical of a shale interval (very low hydraulic conductivity) and it would have essentially been a no flow barrier to the more permeable Masters coal above it. Groundwater Vistas treats the bottom of the model as a no flow boundary. Therefore, the Lebo Shale is for all practical purposes included in the model as a confining interval with the way the model is currently defined.

Comment MuK 63

Mine Plan, Addendum MP-3 Groundwater Model, 63. Please provide appropriate cross section(s) of the model grid overlaid with the drill hole data collected during baseline characterization. This will help the evaluation of the adequacy of model layer thicknesses against the stratigraphic field data. (MK)

Response MuK 63

As noted in Addendum MP-3 Section 4.1, the Groundwater model layers were developed from a 3D geologic model developed from drill hole data within the project area developed for the purposes of making volumetric coal estimates. Minor updates to the surfaces were made where new data provided by additional exploration drilling was completed. An additional figure was developed (Addendum MP-3 Figure 4.1-3) and included in Addendum MP-3 that depicts actual cross sections cut from the groundwater model. Addendum D5-3 of Appendix D5 includes geologic cross sections with drill hole data that can be compared back to the actual cross sections included in Figure 4.1-3 of Addendum MP-3.

Comment MuK 64

Mine Plan, Addendum MP-3 Groundwater Model, 64. Please clarify how the layers were modeled to represent the confined/unconfined aquifer types. (MK)

Response MuK 64

Groundwater Vistas has a "layer type" control that was set to #5: Confined/Unconfined, which allows the model to determine whether to use storativity or specific yield for the storage coefficient based on the elevation of the water elevation vs. formation tops. Groundwater Vistas handles the aquifer type classification without further inputs.

Comment MuK 65

Mine Plan, Addendum MP-3 Groundwater Model, 65. In addition to model calibration, please provide justification for the recharge rates applied in the model including any literature references. (MK)

Response MuK 65

The initial recharge rates utilized in the model were initially estimated based on a USGS study (Water-Resources Investigations Report 01-4278) conducted on the eastern side of the Powder River basin and the Black Hills area. The study entitled, "Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 1931-98." was prepared by JM Carter and D.G Driscoll. In the study Carter and Driscoll reported recharge rates varying from 0.04 inches per year to 2.93 inches per year. The 2.93 inch per year recharge rate was reported within the Madison limestone formation outcrops in the Black Hills while the lower range of recharge rates reported by Carter and Driscoll were estimated for areas in the eastern periphery of the Powder River Basin where the precipitation and soil types are similar in nature to the Brook Mine Permit area. Since calibrated recharge rates in the key recharge areas (the coal outcrops and the scoria outcrops) were within the range of values developed by Carter and Driscoll, the recharge rates used in the model are considered reasonable. Please note that the recharge rate throughout Layer 1 is much lower than the range of recharges developed by Carter and Driscoll. This is reasonable because much of Layer 1 has no hydrologic connection to the underlying coal seams. Additional justification for recharge rates applied in the model is discussed in response to comment BJ57.

Comment MuK 66

Mine Plan, Addendum MP-3 Groundwater Model, 66. Page Addendum MP-3-33 states, "Recharge is applied within the modeling software by applying the recharge to the highest active layer." Please clarify the presence of any modeled 'dry cells' in the model and the influence of applying the recharge to the layers below the dry cells. (MK)

Response MuK 66

As noted in the responses for comments MuK 59 and MuK 60, Groundwater Vistas does not allow for discontinuous layers across the model domain. Along the north and

the west sides of the model there is a good portion of the model domain where the upper layers have been eroded off and do not actually exist. These areas of erosion were accounted for using no flow cells. As shown on Figures 4.4-1 through 4.4-4 of Addendum MP-3, the no flow cells in the top layer are the largest in areal extent while each underlying layer has a slightly decreased areal extent of no flow cells. In this case the no flow cell distribution was adjusted to match the outcrop of each layer. The fact that the software applies the recharge to the highest active layer was taken advantage of during the modeling process, since it is an effective way to apply recharge to an outcropping layer which is under another layer that is eroded away but due to software limitations is still present in the model.

Because CBM operations have generally removed most of the water from the coal seams, there are some locations within the model domain where dry cells during the modeling have caused cells in layer 1 to go dry and the recharge is applied to the next active layer below. While this could be problematic if a high recharge rate were assigned to the model cells, generally throughout the model domain the recharge rate is very low. Therefore, this results in a very minor amount of water coming into the model and did not significantly affect the model calibration.

Comment MuK 67

Mine Plan, Addendum MP-3 Groundwater Model, 67. Table 4.2-3. lists model porosity values. Typically, MODFLOW (flow model) does not use porosity in its calculations. Please clarify the need for this input parameter. (MK)

Response MuK 67

Modflow does not utilize porosity as part of its calculations. However, other modules included in the Groundwater Vistas package such as MODPATH do utilize porosity. In the case of this model, no MODPATH simulations were conducted. Therefore, the porosity term as put into the model has no impact on the calculations. However, porosity is a hydraulic parameter of the aquifer and may be important for future modeling simulations, therefore, the porosity values developed for each aquifer/aquitard unit will be left in the model report. Minor changes to the text in Addendum MP-3 have been made to clarify the role of porosity in this model.

Comment MuK 68

Mine Plan, Addendum MP-3 Groundwater Model, 68. The faults are not modeled in Layer 1. Please clarify the procedure for determining the vertical extents of the faults in the model. (MK)

Response MuK 68

The composition of Layer 1 is predominately claystone. Because Layer 1 is not composed of aquifer material and because the hanging and footwalls are composed of

strata with similar hydraulic properties, displacement due to faulting does not substantially change the flow through the aquitard and placing Horizontal flow barriers in the model in layer 1 was not necessary.

Comment MuK 69

Mine Plan, Addendum MP-3 Groundwater Model, 69. Please provide the input parameters used to model the horizontal flow barriers in the model and discuss their technical reasonableness. (MK)

Response MuK 69

Horizontal Flow Barriers were used in the model to simulate no-flow boundaries created by faulting within the project area. Horizontal flow barriers require two input parameters in Groundwater Vistas including wall thickness and hydraulic conductivity. The input parameter used in the model for wall thickness was 10 feet and a hydraulic conductivity of 1.0 x 10^-5 ft/day was used. The horizontal flow barrier parameters as applied will essentially limit all but a very minor amount of flow across the barrier. As described in the response to comment MuK 51, the coal seams within the project area are relatively thin as compared to the fault offsets so it is reasonable to assume that the faults will significantly impede flow in the aquifer units.

Comment MuK 70

Mine Plan, Addendum MP-3 Groundwater Model, 70. Page Addendum MP-3-40 states, "As the current, post-CBM potentiometric surface is considered the static level……." Please provide the implications of this assumption, on the model calibration of hydraulic parameters and the mode predicted hydrologic impacts (over estimation of drawdown vs. underestimation) (MK)

Response MuK 70

Addendum MP-3 Sections 4.8.1, 4.10, and 4.11 all discuss the implications of CBM impacts. In addition, the response to comment MuK 53 also discusses CBM impacts to water levels. As discussed in the response to comment MuK 53, the model conservatively assumed that CBM operations have lowered the water levels in the eastern portion of the model domain to a level near the top of the coal seams. To simulate this drawdown, the elevations of each general head boundary on the east side of the model were set at an elevation just above the top of the coal seam. The general head boundaries elevations remained the same in both the steady state and the transient models. Essentially, this means that the model operated under the assumption that the post CBM impacts were permanent prior to and after the Brook Mine mining activities.

The assumption that the water levels have been permanently impacted by CBM did have a significant impact on model calibration. The severely depressed water levels

caused by CBM operations have resulted in a large number of cells going dry. The hydraulic parameters of the aquifer units within the eastern portion of the model domain were not adjusted to eliminate the dry cells since it is reasonable to assume that, with the severe drawdown modeled, the coal seams could have been dewatered in these areas. Therefore, even though the effects of the CBM drawdowns were observed during calibration, no specific adjustments were made to the modeled aquifer characteristics to eliminate these impacts. The dry cells did complicate calibration of the model because they cause instability in the MODFLOW model calculations and results.

The model was developed to take into account impacts from the combined effects of CBM and the proposed coal mining. In general, CBM development impacts are significantly larger than the predicted impacts from the Brook Mine. Therefore, ignoring CBM impacts would have significantly under predicted the potentiometric surfaces within the model domain and overestimated the impacts that Brook Mine would have on the system.

Many of the CBM wells are actively being plugged and abandoned. If this trend continues, there is a chance that recovery of water levels from CBM impacts may begin which will result in recharging of the coal seams. If this happens, it is anticipated that the model conservatively over predicts the impacts to the region especially in the long term recovery scenarios.

Comment MuK 71

Mine Plan, Addendum MP-3 Groundwater Model, 71. It is noted that Table 4.7-1 summarizes the calibration residuals and statistics from the calibrated model. Please consider providing additional presentations of the calibrated model statistics. This will enable an easier evaluation of any spatial bias in the model calibration. (MK)

a. X-Y plot of observed vs. simulated water levels.

b. A map plotting the residuals to show the spatial distribution

c. Provide a summary statistics table with Mean Error, Mean Absolute Error, Sum of Squared residuals for the calibrated model. It is noted that some of these values are presented in the sensitivity analysis. However, a compiled summary statistics table would be very helpful.

Response MuK 71

As requested the following additions have been made to the groundwater model report:

A. An X-Y plot of observed versus simulated water levels has been added in the report as Addendum MP-3 Figure 4.7-1.

B. The residuals have been added to figures 4.7-2, 4.7-3, and 4.7-4 of Addendum MP-3.

C. Table 4.7-1 of Addendum MP-3 has been updated to include additional statistics.

Comment MuK 72

Mine Plan, Addendum MP-3 Groundwater Model, 72. In addition, to the measured water levels, please clarify if there were any flow measurements used for model calibration. (MK)

Response MuK 72

There are no areas within the model domain where it was possible to collect any flow measurements that would support the modeling effort therefore, no flow measurement were used in the calibration.

Comment MuK 73

Mine Plan, Addendum MP-3 Groundwater Model, 73. Please provide a water budget table (in acre-feet per year or cubic-feet per day) showing all the inflows into the model and outflows from the model.

Response MuK 73

The following tables summarizes the inflows and outflows from the model domain during the steady state period, 5 years into mining, the end of mining, and at the end of recovery.

Mass Balance of Steady State Calibrated Model		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
General Heads	16,107	22,890
River	2,569	410
Drains	-	560
Recharge	5,168	-
Total	23,846	23,860

Mass Balance 5 years into Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	12,496	11,431
General Heads	16,130	22,904
River	2,688	385
Drains	-	1,774
Recharge	5,434	-
Total	36,749	36,494

Mass Balance End of Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	3,670	4,146
General Heads	16,135	22,902
River	2,705	365
Drains	-	532
Recharge	5,430	-
Total	27,941	27,945

Mass Balance End of Recovery		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	1,698	2183
General Heads	16,138	22,901
River	2,714	363
Drains	-	535
Recharge	5,427	-
Total	25,978	25,983

Comment MuK 74

Mine Plan, Addendum MP-3 Groundwater Model, 74. Please provide a comparison of model simulated inflows and outflows against conceptual estimates of inflows and outflows. This comparison will act as another verification/check for the technical adequacy of the groundwater model (Example model GHB flows vs. reasonable estimated conceptual flows). (MK)

Response MuK 74

Response to comment MuK 73 includes tables that show the inflows and outflows from the model during the steady state period, 5 years into mining, the end of mining, and at the end of recovery. The five main categories of inflows and outflows include 1) storage, 2) general head boundaries, 3) river boundaries, 4) drains, and 5) recharge. Following is discussion regarding model predicted inflows and outflows for each category:

1) Storage – During the steady state model there is no inflow or outflow from storage so storage is not included in the first mass balance table in prepare for comment MuK 73. The model predicts that during active mining more water will come out of storage than will go into storage. Conceptually this is reasonable since during mining, water from the coals would be draining into the mined out areas. There is a trend of water continuing to come out of storage even after mining ceases. Even though the volume of water coming out of storage is quite low, it is contrary to the conceptualization of the system to have water leaving storage after mining because at this point water should be going back into storage. This phenomenon is attributed to the fact that many of the

cells in the model go dry during mining because CBM operations have significantly dewatered the coals and there is not much water available in storage (see comment MuK 70). When the cells go dry, MODFLOW treats them as no flow areas and there can be a ripple effect that causes additional cells going dry. Since MODFLOW is not very efficient at rewetting dry cells when they should be resaturated, this ripple effect has caused permanent changes in the model. Over a long time the model would be expected to come to a steady state condition. The tables prepared in response to comment MuK 73 indicate that even at the end of recovery, the model is not yet at the new equilibrium that would eventually be reached with the additional dry cells.

2) General Head Boundaries – The amount of water going into and out of the model domain via the general head boundaries remains relatively consistent throughout the modeled operations. This is reasonable because the general head boundaries are a long distance from the mining area and would not be expected to be significantly impacted by mining. In addition, the total volume of outflows from the general head boundaries generally balances the inflows from other sources. This is conceptually correct.

3) River Boundaries – The conceptual inflow and outflow from the coals to the Tongue River are discussed in detail in comment MuK 56. Groundwater Vistas does apply the River Boundary cells to the bottom of the layer in which they are inserted. The Tongue River Boundary cells were inserted into the model up to the point where Goose Creek joins the Tongue River. At that location the top of the Carney coal is estimated to be approximately 100 feet below the surface. Since the alluvium is generally much thinner in this area and there is actually a large amount of low permeability strata between the Tongue River alluvium and the coal (described in comment MuK 56), the model likely overestimates the contribution of the River boundary cells to the model because the river boundary cells provide a direct connection (in the model) between the river and the coals where there is not a physical connection. This conservatively over estimates how much water discharges from the River Boundary Cells to the model.

4) Drains – One drain was placed into layer 1 in the northeast side of the model domain to allow water to drain from the model where the Tongue River crosses the domain boundary. This represents the amount of water in layer 1 lost to the surface water system. The total discharge from this drain during steady state conditions is 560 ft^3/day (2.9 gpm). While no physical measurements were (or can be) made to verify this amount, conceptually it is reasonable. The strata along the Tongue River likely does discharge a small amount of water to the River where it cuts through the numerous perched sand lenses that become saturated from natural recharge. There is no evidence of large groundwater discharges to the Tongue River in this area so it makes sense that a small

discharge to the River (rather than a large discharge) would be observed in the model. During mining, drains were added to the model to remove water from the mine pits. The tables indicate that during mining the discharges from the drains do increase as expected. After mining is complete, discharges from the drains return approximately to premining levels which is conceptually correct.

5) The recharge amount used in the model stays at relatively the same level throughout the simulations. Total recharge across the model area is approximately 28 gpm. As is described in comment #65 the recharge rates are reasonable based on available studies.

Comment MuK 75

Mine Plan, Addendum MP-3 Groundwater Model, 75. Page Addendum MP-3-40 states, "Due to a system of thin aquifers with similar sources and sinks and homogeneous hydraulic conductivities, the head values of the steady-state model were nearly identical between the separate coal layers as noted in Table 4.7-1." Please clarify whether this statement implies that the interburden (where present) between the coal seams is not a confining unit. (MK)

Response MuK 75

This statement is an observation only based on review of modeled values and does not suggest a lack of confinement exists. Pumping tests conducted in separate aquifers demonstrated that the interburden provides confinement between the Carney and Masters aquifers as described in Section D6-8.3.2.3 of Appendix D6. In addition, Table 4.7-1 of Addendum MP-3 shows that at each cluster where both coal seams contained measureable water, the difference in measured water levels between the coal seams was higher than the modeled difference. This suggests that the vertical hydraulic conductivity assigned to the interburden in the model may be higher than the actual hydraulic conductivity of the interburden in the field. The use of a higher hydraulic conductivity for the interburden in the model will overestimate the drawdown in the other coal seam therefore, the predicted drawdown will be conservative.

Comment MuK 76

Mine Plan, Addendum MP-3 Groundwater Model, 76. In figures 4.7-1, 4.7-2 and 4.7-3, please consider including the observed/interpreted water level contours and the measured water level elevations. This will enable to visually evaluate the observed vs. simulated water levels. (MK)

Response MuK 76

Figures 4.7-1, 4.7-2, and 4.7-3 of Addendum MP-3 have been updated to include both observation wells and observed elevations as well as observed potentiometric contours.

Please note that in response to Comment MuK 71 an additional figure was added to this section (Figure 4.7-1) and these figures have since been renumbered to 4.7-2, 4.7-3, and 4.7-4.

Comment MuK 77

Mine Plan, Addendum MP-3 Groundwater Model, 77. Page Addendum MP-3-45 states, "…….and if CBM production ceases, recovery rates will likely be higher than estimated in the model." Please clarify if this statement implies that currently, there are CBM wells that are operational in the area and are pumping out groundwater. (MK)

Response MuK 77

Although substantially less than past years, some CBM wells in the area are still producing groundwater. Since CBM production has been ongoing for the last 15+ years the CBM operations have significantly lowered the water levels in the coals as is noted in the report. Records of groundwater withdrawals can be found on the Wyoming Oil and Gas Conservation Commission's (WOGCC) online database at: wogcc.state.wy.us. According to WOGCC records there has been no groundwater production associated with CBM in Townships 57 and 58N Range 84W since 2012. However production is still occurring in Townships 57 and 58N Range 83W as well as Township 56N Range 83 and 84W. The portions of the model domain where CBM production may occur are located in Townships 56 and 57N Range 84W.

Comment MuK 78

Mine Plan, Addendum MP-3 Groundwater Model, 78. Please consider removing the model sensitivity to storage coefficients and porosity. Steady state groundwater model equations do not include these parameters in any of the model calculations. (MK)

Response MuK 78

As noted in this comment, the final model did not include a transient calibration and a sensitivity analysis on storage coefficient and porosity is not appropriate. The section and discussion regarding model sensitivity to the storage coefficient and porosity has been updated and removed as appropriate.

Comment MuK 79

Mine Plan, Addendum MP-3 Groundwater Model, 79. Please clarify if the faults in the model and their parameters were considered in any of the sensitivity analyses. If not, please consider performing a detailed and thorough sensitivity analysis, as the faults appear to influence the drawdowns simulated by the groundwater model. (MK)

Response MuK 79

The faults do influence the drawdowns and flow patterns simulated in the groundwater model. However, as noted in the response to comment MuK 51 the displacement observed in the faults roughly 5 times as thick as the modeled coal seams. Given the fact that the dominant lithology in the area is low permeability claystone/siltstone, it is very likely that where faulting has occurred the displacement has resulted in coals being immediately adjacent to the low permeability strata. Therefore the faults are assumed to be hydrologic barriers to water flow. Based on the best available mapping, these faults have been placed into the model. Because the faults are physical parameters that were developed along with development of the geological model (i.e. elevations and thicknesses of the geological layers), a sensitivity analysis was not performed on the faults.

Part of the reason that the faults influence the groundwater responses in the groundwater model to the degree that they do is because of the CBM impacts. Because the CBM operations have significantly lowered the water levels in the coal seams, the faults create a shadow effect that results in many of the cells immediately downstream of the faults going dry. If there had not been any CBM dewatering operations performed in the coals, the water levels would be significantly higher and the effects of the faults would not be as pronounced.

Comment MuK 80

Mine Plan, Addendum MP-3 Groundwater Model, 80. In addition to the simulated drawdown maps, please consider providing hydrographs at strategically selected locations. This will enable a better presentation of the impacts over time. (MK)

Response MuK 80

As suggested, Appendix A has been added to Addendum MP-3 which depicts the modeled water elevations during the model simulation period at all the water supply wells identified within the model domain (CBM wells excepted) and at selected alluvial target locations within the model domain.

Comment MuK 81

Mine Plan, Addendum MP-3 Groundwater Model, 81. Please clarify if the three wells listed in Table 4.9-1 are the only wells considered for the analysis. Also, provide a discussion on the methodology to narrow down the analysis from several wells shown in the groundwater rights maps to these three wells. (MK)

Response MuK 81

Additional wells beyond those originally presented in Table 4.9-1 were considered in the analysis. Table 4.9-1 has been updated to include all the wells considered in the analysis. To determine which wells were included in the analysis, completions were

compared to modeled surfaces to estimate which formation in which the well was completed. Those thought to be completed in the Carney/Masters sequence were included. Please note that the wells included in Table 4.9-1 error on the side of being over inclusive. Some of the wells are believed to be completed in multiple zones but the analysis assumes that they are only completed in the coal seams of interest. In addition, the well depths were determined based on the State Engineer's database and in many cases well depth data was left blank or was questionable. If there was a question whether a well was actually completed in the coal aquifer of interest the well was assumed to be completed in the coal. Therefore, the well list may include some wells that are not completed in the coals of concern.

Comment MuK 82

Mine Plan, Addendum MP-3 Groundwater Model, 82. Please provide (or reference) a discussion about the three wells listed in Table 4.9-1, their depths, screened intervals and other pertinent information. (MK).

Response MuK 82

Table 4.9-1 has been updated to include total depth as well as the screen intervals for all the wells. Additional details on the wells can be found in Adjudication Appendix B.

Comment MuK 83

Mine Plan, Addendum MP-3 Groundwater Model, 83. Page Addendum MP-3-60 states, " To measure the impacts to the Tongue River and Goose Creek, a series of targets were placed along these drainages in Layer 1" Please define the term target. Also, clarify if these targets are located in the alluvial aquifer. (MK)

Response MuK 83

The targets as used in Groundwater Vistas are simply locations where heads are measured and compared with measured heads (if there are any available). Ground Water Vistas generates a hydrograph throughout the transient period of mining and recovery for each target. These targets were placed in Layer 1 to estimate the impacts of mining to surface water bodies. These targets are located where the alluvial aquifer is simulated in Layer 1. Targets representing existing well locations were also put in layers 4 and 6 as well as discussed in Comment MuK 81.

Comment MuK 84

Mine Plan, Addendum MP-3 Groundwater Model, 84. Page Addendum MP-3-60 states, "These targets demonstrate that the estimated maximum impact to Tongue River Alluvium is conservatively estimated to reach 2.5 feet drawdown near the river." Please expand the discussion on the impacts to surface water flows including translating the

drawdown to an estimated decrease in the groundwater baseflows to Tongue River and Goose Creek. (MK)

Response MuK 84

As shown on the hydrographs included in Appendix A, the maximum water level decline of 2.5 feet to the Tongue River alluvium occurred permanently and was caused by dry cells. This 2.5 foot drawdown is not believed to be a real drawdown because it resulted from model instability rather than a real predicted result. If the model did not have dry cells that caused permanent changes in the model, the maximum drawdown due to mining is estimated to be less than 0.5 feet.

As noted in the response to comment MuK 56, the model estimates the coals will contribute a relatively insignificant amount to water to the base flow of the Tongue River. As noted in Comment MuK 73 in the steady state model the River contributed approximately 2,569 cubic feet per day to the model while the river received 410 cubic feet per from the model. The net result is that in the steady state model 2,159 cubic feet per day (11.2 gpm) was contributed from the river to the model. For comparison, at the end of mining, the River contributed 2,714 cubic feet per day to the model and received 363 cubic feet per day from the model. The net result at the end of mining was that 2,351 cubic feet per day (12.2 gpm) was contributed from the River to the model. Over the simulated mining period the model estimates that the increased contribution of flow from the River to the model will be 1 gpm which represents approximately a 9% increase in flow.

Please note that in Groundwater Vistas the river boundary cells go to the bottom of the layer which likely overestimates the impacts to the River. Within the eastern portion of the model domain the coal aquifers can be 200 or more feet below the level of the river while the Tongue River Alluvium is estimated to be between 15 and 30 feet thick based on the thickness of alluvial wells constructed by Big Horn Coal in the area. Therefore, within the eastern portion of the model domain, the coals may be significantly below the alluvium and no River boundary was included in this portion of the model. However, there is an intermediary region where the actual level of the River is some 30-70 feet higher than the coals. At these locations the River boundary cells were left on to conservatively show the impacts to the river. However, the alluvium in these areas is likely thinner than 40-70 feet. As a result, the model allows the River to directly contribute water to the coals below and the model is expected to overestimate the impacts to the Tongue River in these locations.

Comment MuK 85

Mine Plan, Addendum MP-3 Groundwater Model, 85. Please provide a statement on any hydrologic impacts predicted by the groundwater model to areas outside the Brook mine permit boundary. (MK)

Response MuK 85

The only impacts outside of the Brook Mine Permit Boundary would be observed at the existing water supply wells. Table 4.9-1 describes the estimated impacts at all the water supply wells in the Model domain that will be impacted both inside and outside of the Brook Mine Permit Boundary. Please note that most of these wells are located outside of the Brook Mine permit boundary. As shown on Table 4.9-1 the largest model predicted impact seen at any existing well outside of the Brook Mine Permit boundary is 20 feet which would be observed at P48251W. As shown in the hydrograph for this well in Addendum MP-3 Appendix A, this impact is estimated to be short lived (approximately 4 years). Model predicted drawdowns at the rest of the wells are less than 5 feet. At many of the wells predicted drawdowns are less than 1 foot over the life of the mine.

Comment MuK 86

Mine Plan, Addendum MP-3 Groundwater Model, 86. Please provide a discussion on the simulated impacts caused by mining to surface water – groundwater interaction within the model domain. (MK)

Response MuK 86

Please see the response to comment MuK 84.

Comment MuK 87

Mine Plan, Addendum MP-3 Groundwater Model, 87. Please compare the model simulated water balance between pre-mining, during mining and post mining conditions. Consider including a table that presents the water balance during select periods showing the flows from all sources and discharges to all the sinks within the model domain. Provide a detailed discussion addressing any changes in the model simulated water balance between pre-mining, during mining and post mining conditions. (MK)

Response MuK 87

Please see responses to comments MuK 73 and MuK 74. A detailed discussion is included in the responses to these comments.

Comment MuK 88

Mine Plan, Addendum MP-3 Groundwater Model, 88. In addition to the maps presented on the recovery estimates, please provide hydrographs at strategically selected locations. This will enable a better presentation of recovery over time. (MK)

Response MuK 88

As described in response to Comment MuK 80, an appendix (Appendix A) has been added to Addendum MP-3 which depicts the modeled water elevations at a number of well and target locations within the model domain.

Comment MuK 89

Mine Plan, Addendum MP-3 Groundwater Model, 89. The modeling documentation lacks discussion on the backfill aquifer. In the recovery model, please clarify how the model treats the backfill aquifer (spoils aquifer) and its resaturation. Please provide a discussion (or reference) to the hydraulic properties of the backfill materials used to create the backfill aquifer and the aerial extent of the backfill aquifer. (MK)

Response MuK 89

Mine Plan Section 4.10 discusses the backfill aquifer. Within the areas where the highwall miner is used for mining, an open cavern will be left behind. Unless the mined out areas collapse, the backfill aquifer is essentially an open cavern with 100% porosity. The modeling software used for this effort does not have the ability to transiently change aquifer properties, and during resaturation of the mined areas the assigned storage coefficients remained the same as the original aquifer properties. As a result, the model may underestimate the time that it takes for the aquifer to resaturate where the mining methods have increased the porosity and thereby resaturation volume. Inversely, in the slots mined with traditional open cut mining techniques, coal will be removed and replaced with overburden material. In these locations the backfilled material is expected to have poor aquifer characteristics because it will primarily be a mix of fine grained clay and silt with some sand. In these areas the aquifer will essentially be removed. Again, the modeling software does not have the ability to transiently change aquifer properties and this effect was ignored during the modeling.

Figure MP-3-4.9-1 shows the areal extent of mining and Addendum MP-3 Figures 4.7-2, 4.7-3, and 4.7-4 depict the areas that were modeled as dry within the Brook Mine permit area. It is important to note that a large percentage of the area that will be mined is dry prior to the initiation of mining. In addition, figures in MP-3 Section 4 show that after mining, some of the areas go dry and do not rewet. In the areas where slots are excavated this prediction is reasonable because the backfill will act as an aquitard with poor aquifer characteristics. A layer by layer review of the mined area at the end of mining was conducted to determine conceptually how ignoring the changes in the coal porosity and changes in backfill material may have impacted the model predictions.

Upper Carney-With exception of a very small portion of mine block 9 (Figure MP-3-4.9-1). The entire Upper Carney coal is unsaturated. Therefore, there is no resaturation and no recovery. The model estimates are appropriate for the Upper Carney coal.

Lower Carney - Most of the mine blocks as well as the open slots are dry in the Lower Carney at the end of mining. Only mine blocks 1, 2, 5, 9, and 10 had substantial portions that were saturated. As a result, the potential error created by transient aquifer properties in model predicted resaturation rates to the underground mined coal blocks in the Lower Carney coal, if any, is expected to be very low. With the exception of the slots cut to mine blocks 5, 9, and 10, all of the slots cut to mine the Carney Coal will also be dry; therefore, resaturation at those locations will not substantially impact model predictions. The slots cut for blocks 9 and 10 generally run parallel to the direction of water flow. If the coal in these locations is completely removed and replaced with an aquitard, the impact to the aquifer will be minimal because water will simply flow around the portion of the backfilled aquifer. The open pit slot cut adjacent to mine block 5 does run perpendicular to the direction that water is flowing and may change the groundwater flow patterns in this area. However, the location of the slot is near the groundwater divide caused by the fault just to the south. Therefore, this slot is not expected to substantially impact groundwater flows either

Masters - Most of the Masters Coal mine blocks are saturated. Only blocks, 4, 5, 6, and 7 have substantial areas that are not saturated. In the mine blocks where underground mining techniques are employed the model may underestimate the time it takes for resaturation to occur because the storage coefficient is not updated to account for the increased porosity of the mined out block. However this resaturation time will be balanced out by the fact that there will be no aquifer replaced in the open cuts to resaturate, and thus these areas would not resaturate as the model predicts. With the exception of the open cut for mine block 5, all of the open cuts are oriented so that they will have minimal impacts on the natural flow gradients in the wellfield or are located within or adjacent to dry areas. As previously noted, the open cut near mine block 5 is located adjacent the drainage divide so it will not significantly change the water flow within the aquifer.

Due to the fact that much of the mined area is dry, the actual area mined that is below the water table is relatively small, and that the open cuts are oriented such that they have minimal impacts to groundwater flow, the recovery analysis performed by the model is reasonable. Also, as noted, the areas where underground mining is employed and the model overestimates the rate at which the aquifer is resaturated are counterbalanced by the areas of open cuts where the aquifer will not be replaced and the model underestimates the time it takes for the strata to resaturate.

Comment MuK 90

Mine Plan, Addendum MP-6 Subsidence Control Plan, 90. Figure MP6.1-1 shows "Monarch Seam Surface Only Mining". Please clarify if the Monarch seam is targeted for mining in the appropriate sections of Appendix D5, Appendix D6 and mine plan. (MK)

Response MuK 90

The appropriate sections of Appendix D5 and D6 have been updated.

Reclamation Plan

Comment BJ 57

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-37, The narrative describes the sources of recharge to the coal seams. One lithology mentioned as a positive recharge contributor is the overlying burn, scoria, or clinker material, generated by coal fires. It is a common misunderstanding that the scoriaceous material recharges coal or overburden. It would appear, at first glance, that the broken, vuggy material would be capable of conveying large amounts of water from the surface to materials beneath. That is not the case, however, as the coal/scoria interface has a zone of partially metamorphosed coal ash that lies between the burned material and the remnant coal. I have seen this zone many times during my 25 year career in the coal mines when supervising coal and overburden removal. This zone is characterized by a white to light gray, clay band that ranges in thickness from 6 inches to a foot or more. It is the same high silica ash found in the bottom ash of the local power plants that burn PRB coal. This ash band acts as an aquaclude, preventing water from entering or escaping the coal. Because of this, any recharge models that were run using the scoria as a recharge source must be reevaluated using new layers that do not include the scoria. Rerun recharge models if needed.

Response BJ 57

It is true that the partially metamorphosed coal ash layer between the coal and the scoria has the potential to limit recharge from the scoria to the coal. However, even though the permeability of this layer is low, there will be areas where the coal has collapsed or other geologic variances such as a thinning section which will allow for water from the scoria to come into contact with the coal. Therefore, even though the scoria may not be directly in contact with the coal, there is still a recharge component to the scoria, albeit; significantly lower than if the scoria and coal were in direct contact. This low recharge rate is reflected in the groundwater model. The calibrated recharge rate used in the groundwater model for the areas covered by scoria was 0.35 inches per year. For comparison purposes, the recharge rates assigned to the Carney and Masters outcrops, where no scoria was present, varied from 0.2 to 0.88 inches per year. Considering that in the scoria areas a very large percentage of direct precipitation is expected to infiltrate into the scoria, the 0.35 inch per year recharge rate represents a significant reduction in the amount of water available (which could be upwards of 10 inches per year) to infiltrate into the coal seams. Therefore, the calibrated recharge rate included in the groundwater model does take into account the low permeability layer between the coal and the scoria.

Comment BJ 58

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-39, The second sentence in the first paragraph has an odd, difficult to understand syntax. Please rewrite the sentence for clarity.

Response BJ 58

Revised page RP-39 text as requested. The sentence will now read "The mine will consult with WDEQ/LQD to determine the number of spoil wells that will be tested".

Comment BJ 65

EXHIBITS, Reclamation Plan, Exhibit RP.6-1, The permit boundary on this map is inaccurate. Please recreate the permit boundary layer.

Response BJ 65

Revised Exhibit RP. 6-1 as requested.

Comment BJ 66

EXHIBITS, Reclamation Plan, Exhibit RP.8-3 and Exhibit RP.8-4, The post mining potentiometric surfaces for the Carney and Masters beds are suspended in mid-air over Slater Creek. Please terminate the contour lines at the outcrop or use a dotted line to indicate the calculated potentiometric surface.

Response BJ 66

Revised Exhibit RP.8-3 and RP.8-4 as requested.

Comment DS 24

Reclamation Plan, Section RP.4. This brief section discusses what is considered spoil material to be removed during mining. The section states that spoil does not include coal, but there are some very narrow coal seams with numerous stringers of clay or of such low quality that will probably not be mined and will be placed in backfill. Also, the top layers of most coal seams are quite "dirty" and would also be removed and backfilled. In order to provide the readers with a more accurate description of the mining and reclamation processes, please revise the text to show that some coal-laden materials will also be considered spoils and will be backfilled during reclamation.

Response DS 24

Revised text as requested.

Comment DS 25

Reclamation Plan, Section RP.5.2. Please provide a description of the methods used to control topsoil depth during replacement. Most mining operations use stakes with surveyed marks as guides for controlling soil application depths.

Response DS 25

See Section RP.5.4 for a description of the methods used to control topsoil depth during replacement.

Comment DS 26

Reclamation Plan, Section RP.5.4. Variability in topsoil depth cannot be avoided due to limitations imposed by the equipment used and the pre-application preparations which may include ripping of the compacted overburden surface. Typically, the depth of topsoil application may vary 25%, but the average depth should be closely monitored and should not exceed the average availability. Also, because some soils exhibit unsuitable characteristics and will not be used for reclamation, discussion of the use of substitute topsoil materials is warranted in this section.

Response DS 26

Revised text as requested. Added discussion about substitute topsoil being an option if not enough suitable topsoil is salvaged.

Comment DS 27

Reclamation Plan, Section RP.5.6. Sediment control measures will be required to prevent untreated runoff from exiting reclaimed lands onto adjacent native lands. Please provide a discussion of the sediment control measures to be used.

Response DS 27

Revised text as requested.

Comment DS 28

Reclamation Plan, Section RP.8.2. This section states only that impoundments will require Landowner, LQD and SEO approval. Prior to construction of post mining impoundments, SEO approved plans for the impoundments must be submitted for inclusion in the permit Reclamation Plan. Please include a statement that a Reclamation Plan revision will be approved by the LQD prior to construction of impoundments.

Response DS 28

Revised Section RP.8.2 to include a statement regarding LQD approval before the construction of postmine impoundments.

Comment DS 29

Reclamation Plan, Section RP.11.1. The primary final land use for the permitted acreage will be grazing and wildlife. Only areas where the current use is industrial will remain industrial land uses after mining is completed. Therefore, in order for any constructed buildings or railroad access to remain following mining, and a permit revision to change the land use will be required. It is not just a matter of demonstrating usefulness to the LQD and receiving landowner consent. This will be a major revision to the permit that will require public notice. Clarification should be provided concerning the steps involved to allow building to remain.

Response DS 29

Revised text as requested. Eliminated discussion in Section RP.11 regarding leaving any buildings, facilities, and equipment following completion of mining.

Comment DS 30

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30

See Mine Plan MP.1.6 for a description of permit terms and initial year. Revised text in Reclamation Plan Section RP.13 to reference Mine Plane MP.1.6. Revised Exhibit RP.5-1 adding "Note: Year 3 corresponds to the year 2019" in Legend.

Comment DE 19

Reclamation Plan, Section RP.5.1, page RP-6 – RAMACO states that the contoured surface will be scarified or ripped, if necessary. The mine should commit to scarifying or ripping all surfaces prior to topsoil replacement.

Response DE 19

Revised text as requested. Remove "if necessary" from sentence.

Comment DE 20

Reclamation Plan, Section RP.5.6, page RP-8 - The 1st sentence of the 2nd paragraph doesn't make sense. Please correct.

Response DE 20

Revised text as requested. The sentence now reads "Rills and gullies occurring in redistributed soil precluding the achievement of the approved postmining land use or the reestablishment of vegetative cover will be rectified".

Comment JJ 5

Reclamation Plan, 5. Exhibit RP 6-1 also displays permit boundary discrepancies in regards to the section lines on it and those located on the Adjudication Exhibit 1. Please update accordingly.

Response JJ 5

See response to comment BJ 65. Revised Exhibit RP.6-1 as requested.

Comment JJ 6

Reclamation Plan, 6. Table RP 6-1 states that there are 11.6 acres of wetlands and other aquatic resources. Please discuss where these acres are to be reclaimed and show them on the Exhibit RP. 6-1 which displays the reclaimed vegetation communities and their locations.

Response JJ 6

Revised Section RP.9 to include reference to Exhibit RP.6-1 for location of reclaimed wetlands and OAR. Revised Exhibit RP.6-1 to include reclaimed wetlands and OAR locations.

Comment MK 24

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, Assuming the Tongue River is an AVF, this section should discuss how the essential hydrologic functions will be maintained and/or reestablished, as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(ii). As noted in Comment No. 21, the essential hydrologic functions of the Tongue River AVF need to be identified and a monitoring system needs to be installed. (MDK)

Response MK 24

Revised text as requested in Section RP.10.

Comment MK 25

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 25. As noted in Comment No. 21, the adjacent Goose Creek AVF also needs a monitoring system to demonstrate essential

hydrologic functions are maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 25

Revised text as requested in Section RP.10.

Comment MK 26

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 26. This section may also need to be addressed if the LQD finds that other AVFs exist on or near the permit area. If AVFs are determined to be present, the essential hydrologic functions must be maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 26

Revised text as requested in Section RP.10.

Comment MK 75

Reclamation Plan, Section RP.3.3 Postmine Slope Analysis, 49. Please provide a discussion that compares the pre-mine vs. post-mine slope characteristics. A table would be helpful that compared the minimum, maximum, and average slopes under pre-mine and post-mine conditions. (MDK)

Response MK 75

Added Table RP.3-1 comparing premining and postmining slopes. Updated Section RP.3.3 of text to include reference to the new table.

Comment MK 76

Reclamation Plan, Section RP.3.5 Drainage Reestablishment, 50. It is stated that mining will disturb portions of the Slater Creek channel and the reclamation will entail reconstruction. However, the Mine Plan PHC (Section MP.6.1) stated that Slater Creek "will still flow naturally around the trench", and "Because Slater Creek's flow will not come into contact with mining activities, no impact will be made to water quality". Please provide a clear and explicit description of the extent of direct disturbance to the Slater Creek channel. This description should be consistent between the Mine Plan and Reclamation Plan. (MDK)

Response MK 76

As stated in the revised Section MP.6.1 of the Mine Plan, the only anticipated surface disturbance to Slater Creek during mining will be the redirection of the channel

through a culvert under a proposed haul road. No text was edited in response to this comment.

Comment MK 77

Reclamation Plan, Section RP.4.2 Mitigation of Unsuitable Material , 51. Minor channels are defined as ephemeral streams but there is no definition provided for "major channels". Please provide a definition and also illustrate an example of a major channel within the proposed permit boundary that would fit into this category. (MDK)

Response MK 77

Revised text in Section RP.4.2 to provide the definition of major channels.

Comment MK 78

Reclamation Plan, Section RP.5.6 Erosion Control and Conservation Practices, 52. The first sentence of the second paragraph…"Rills and gullies…" needs revised, as it appears to be missing one or more words. (MDK)

Response MK 78

See response to Comment DE 20. Text revised as requested.

Comment MK 79

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 53. The second sentence discusses stockponds possibly being disturbed by mining activities. The Mine Plan PHC did not mention that any existing stockponds would be disturbed by mining activities. If stockponds are to be disturbed by the mining operation, this should be discussed in the Mine Plan PHC. (MDK)

Response MK 79

The text in the Mine Plan PHC has been revised to clarify the disturbance to stockponds within the permit area. Section RP.7.4 has been revised to clarify the anticipated aquatic habitat locations.

Comment MK 80

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 54. The text states that two additional postmine impoundments will be constructed and their location is shown in Exhibit RP.3-1. This Exhibit shows ten permanent impoundments, both on and adjacent to the proposed permit area. Please revise this discrepancy in the text or change the symbology in the Exhibit to clearly show the two permanent post-mine impoundments. (MDK)

Response MK 80

Revised text in Section RP.7.4. to clarify the postmine impoundment locations.

Comment MK 81

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 55. Please add the major stream name labels (Tongue River, Goose Creek, East Fork Earley Creek, Slater Creek, Hidden Water Creek) to Exhibit RP.8-1. (MDK)

Response MK 81

Revised Exhibit RP.8-1 as requested.

Comment MK 82

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 56. Please explain in the text how the postmine drainage basin parameters in Table RP.8-1 were determined. (MDK)

Response MK 82

Revised text in Section RP.8.1 as requested.

Comment MK 83

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 57. The text states that a comparison of drainage basin parameters in Table RP.8-1 and Exhibit RP.8-1 show that the overall hydrologic balance will remain largely unchanged. This conclusion is not obvious from the Table and Exhibit. How similar are the postmine drainage basin parameters to the pre-mine parameters? Which sub-drainages show the largest change from pre-mine conditions? The text needs to include a more thorough discussion to demonstrate to the reader why exactly the postmine hydrologic balance will be unchanged. (MDK)

Response MK 83

Revised text to include reference to Appendix D6 tables and exhibits regarding drainage basin parameters. Minor disturbance and mining methods contribute to the largely unchanged postmine drainage basin parameters.

Comment MK 84

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 58. The text provides no discussion of the comparison between the pre-mine and postmine modelled discharge values. Please provide this discussion so the reader can determine if the differences are minor or major. (MDK)

Response MK 84

Revised text in Section RP.8.1.1 as requested

Comment MK 85

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 59. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section RP.17. (MDK)

Response MK 85

Revised text as requested.

Comment MK 86

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 60. Similar to Comment No. 8 made for Appendix D6, the HEC-HMS runoff estimates in Table RP.8.4 are much higher than the Miller (2003) equations. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) regression equations.

Response MK 86

See response to Comment MK 34. No revisions to the text were made.

Comment MK 87

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, The last sentence in the first paragraph states that stream reaches for which designed cross sections are provided are identified in plan on Exhibit RP.8-1. There is nothing on this Exhibit that shows which stream reaches have designed cross sections, nor which stream channels are being reconstructed. Please clearly identify this information on this Exhibit. (MDK)

Response MK 87

Exhibit RP.8-1 has been revised as requested.

Comment MK 88

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 62. Exhibit RP.8-2 shows that the main Slater Creek channel will not be disturbed. Please consider this in light of Comment No. 50 that requested clarification on the extent of disturbance to the Slater Creek channel. (MDK)

Response MK 88

See response to Comment MK 76(referred to as Comment No. 50). Revised Exhibits RP.8-1 RP.8-2 as requested. A reconstructed Slater Creek (Figure RP.8-9) cross section has been added to reflect the correct disturbance boundary.

Comment MK 89

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 63. On Page RP-35, second paragraph, it references "reclaimed Slater Creek channel" and channel hydraulics are presented in Table RP.8-5. It is not clear why channel hydraulics are presented for Slater Creek when it will not be disturbed. Is this because reclaimed tributaries to Slater Creek are changing such that the main channel of Slater Creek is expected to be change? Please clarify this in the text. (MDK)

Response MK 89

Slater Creek is included Table RP.8-5 to show that the postmine Slater Creek Channel will be hydraulically similar to premine conditions after mining and reclamation operations have been completed as reclamation of a portion of Slater Creek is expected.

Comment MK 90

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 64. It is unclear exactly how many new postmine impoundments will be constructed. Table RP.8-6 identifies two impoundments (Enhancement Stock Pond 1 and Replacement Stock Pond 1), and these are shown in Exhibit RP.3-1. Exhibit RP.3-1 shows eight other permanent impoundments. Please identify if these are new features to be constructed or if they are existing stockponds that may be affected by the mining operation. (MDK)

Response MK 90

The text in Section RP.8.2 has been revised to clarify that only the new features to be constructed are displayed in Table RP.8-6. Affected existing stockponds will be constructed approximately to premine conditions.

Comment MK 91

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 65. Please identify in this section if there will be a net increase or decrease in post-mine water storage capacity relative to pre-mine capacity. (MDK)

Response MK 91

Revised text in Section RP.8.2 to clarify a net increase in water storage capacity is expected due to the addition of two postmine impoundments.

Comment MK 92

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 66. As mentioned Comment No. 47, it is advised that the applicant discuss with the SEO-Interstate Streams Division any implications for the Yellowstone Compact if new water storage features are proposed that potentially decrease water quantity to the Tongue River. (MDK)

Response MK 92

See response to Comment DS 28(Comment No. 47 mentioned above). Revised text as requested.

Comment MK 93

Reclamation Plan, Section RP.8.4.2 Surface Water Monitoring, 67. The text on Page RP-40 states that the surface water monitoring stations are shown on Exhibit RP.8-4. However, the stations are not shown on this Exhibit. It may be make the most sense to add these to Exhibit RP.8-5 and rename the Exhibit "Postmine Hydrologic Monitoring Locations" so the surface water stations and monitoring wells are on one Exhibit. (MDK)

Response MK 93

Revised the reference in text to state "locations of these sites are shown on Exhibit RP.8-5". Exhibit RP.8-5 was revised to include surface water monitoring stations and renamed as requested. Table RP.8-9 was edited to include all planned surface water stations including postmine impoundment monitoring sites.

Comment MK 94

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 68. The text on Page RP-41 states that water quality samples will be collected at each of the postmine impoundments listed in Table RP.8-6 and presented on Exhibit RP.3-1. Please clarify in the text that this sampling list includes all ten impoundments shown. (MDK)

Response MK 94

Revised text in Section RP.8.4.3 to reference Table RP.8-9 and Exhibit RP.8-5 for postmine surface water monitoring sites including postmine impoundments.

Comment MK 95

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 69. Please add the list of impoundments to be sampled to Table RP.8-9 "Surface Water Monitoring Sites". (MDK)

Response MK 95

Revised Table RP.8-9 as requested.

Comment MK 96

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 70. The postmine impoundments to be sampled appears to be slightly different from the impoundments listed in Mine Plan Table MP.7-1 "Operational Surface Water Monitoring Locations". Table MP.7-1 lists three impoundments (Hall Reservoir, Black Mountain No. 1 Stock Reservoir, and Legerski Bros #1 Stock Reservoir) that are not listed as postmine impoundments to be sampled. Please explain why there is a difference in the operational monitoring and postmine monitoring of some impoundments. (MDK)

Response MK 96

Black Mountain No.1 Stock Reservoir has been added as a postmine impoundment that will be monitored. Legerski No. 1 Stock Reservoir and Hall Reservoir are outside of the areas planned for mining disturbance, however in an effort to further monitor the surface water of the Brook Mine permit area, the reservoirs were added to be sampled quarterly during mining. Table RP.8-9 and Exhibit RP.8-5 have been updated to include Black Mountain Reservoir No. 1 Stock Reservoir.

Comment MK 97

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 71. In the second full paragraph on Page RP-41, "The water quality samples.." please also state that the water quality samples will be compared against WDEQ/WQD Class III groundwater standards, as suggested by LQD Guideline No. 17 for replacement and enhancement stockponds. (MDK)

Response MK 97

Revised text as requested in Section RP.8.4.3.

Comment MK 98

Reclamation Plan, Section RP.8.5.2 Surface Water, 72. At the end of the first paragraph on Page RP-44, it predicts a "slight change" in event peaks and volumes. Please further discuss what is meant by a "slight change", i.e., what is the magnitude of the increase or decrease? (MDK)

Response MK 98

Section RP.8.5.2 has been updated to reflect the change in event peaks and volumes will be less than one percent when compared to premining conditions.

Comment MK 99

Reclamation Plan, Section RP.8.5.2 Surface Water, 73. In the second paragraph on Page RP-44, please clarify the extent of direct mining disturbance to Slater Creek versus tributaries of Slater Creek. This comment relates to previous Comments No. 50 and 62. (MDK)

Response MK 99

See response to Comments MK 76 (comment No. 50) and Mk 88 (Comment No. 62).

Comment MK 100

Reclamation Plan, Section RP.8.5.2 Surface Water, 74. Please provide a discussion as to whether the planned postmine impoundments will affect surface water quantity on or downstream of the proposed permit area. (MDK)

Response MK 100

Section RP.8.5.2 has been revised to include discussion of the effect of postmine impoundments to the surface water quantity on and downstream of the proposed permit area.

Comment MK 101

Reclamation Plan, Section RP.9.1 Introduction, 75. The second paragraph references Appendix D8. Should this be Appendix D10 (Wetlands)? Please revise this if necessary. (MDK)

Response MK 101

The reference has been revised to D10 as requested.

Comment MK 102

Reclamation Plan, Section RP.9.1 Introduction, 76. Please add a statement up front in the Wetland Mitigation section that the USACE has not yet issued a jurisdictional determination for the proposed Brook Mine. Please also provide a statement in the text that the information in Section RP.9 may be subject to change pending the USACE determination. The USACE jurisdictional determination should also be incorporated somewhere into the Mine Permit once that is received by the Brook Mine. (MDK)

Response MK 102

Sections RP.9.1 has been revised as requested.

Comment MK 103

Reclamation Plan, Section RP.14 Bond Release, 77. The LQD no longer requires a bond release verification for "sediment control release". This is now termed "surficial stability verification". More information is available in LQD Guideline No. 23. Please revise the text for this change. (MDK)

Response MK 103

The text in Section RP.14 has been revised by removing the reference to sediment control release.

Comment MuK 91

Reclamation Plan, RP 8.5.3 Groundwater, 91. Section 8.3, page RP-38 states, "The estimated Postmine Potentiometric surfaces for the reclaimed aquifer for the Masters and Carney Seams are presented respectively in Exhibit RP.8.3 and Exhibit RP.8-4. Please provide a summary comparing and contrasting the premine potentiometric surfaces vs. post mine potentiometric surfaces. This comparison should also consider any changes in the hydraulic properties (hydraulic conductivity, storativity, recharge capacity) of the premine aquifers vs. post mine aquifers. (MK)

Response MuK 91

Section RP.8.5.3 has been revised to include discussion regarding the comparison of premine and postmine potentiometric surfaces.

Comment MuK 92

Reclamation Plan, RP 8.5.3 Groundwater, 92. Please discuss any changes in the interaction between the surface water and groundwater systems from the premining through the postmining phases of the operation. (MK)

Response MuK 92

The response to Comment MuK 84 describes interaction between the surface water and groundwater systems from the premining through the postmining phases of operation. In general the changes between the surface water systems and the groundwater systems are expected to be minimal. For a short time during mining it is anticipated that there will be a small (less than 6%) increase in the amount of water that recharges the coal seams from the Tongue River. Once the water levels in the coals recover, no further impacts are expected.

Comment MuK 93

Reclamation Plan, RP 8.5.3 Groundwater, 93. Please discuss the intersection of the postmining topographic and potentiometric surfaces and their effects on the location and size of groundwater-fed water bodies. (MK)

Response MuK 93

Revised Section RP.8.5.3 as requested.

Comment MuK 94

Reclamation Plan, RP 8.5.3 Groundwater, 94. Section 8.5.3, page RP-46 states, "These water quality changes can be qualitatively predicted from the overburden mineralogy and projected post mine hydrology." Please expand this discussion on projected groundwater quality. Provide a discussion on the estimated/ projected post mining groundwater quality. A detailed description of potential changes in water quality from flow through backfill/mined out areas should be included. Any potential changes to water quality in adjacent aquifers should be discussed with respect to the potential for offsite material damage. (MK)

Response MuK 94

Revised Section RP.8.5.3 text as requested.

Comment MuK 95

Reclamation Plan, RP 8.5.3 Groundwater, 95. Please provide a discussion on any anticipated water use during the reclamation period. (MK)

Response MuK 95

As discussed in Addendum MP-3, the only anticipated groundwater uses during the reclamation period are at existing water supply wells. Section RP.8.5.3 has been revised to include additional discussion.

Comment MuK 96

Reclamation Plan, RP 8.5.3 Groundwater, 96. Please address (or reference) any expected post-reclamation subsidence effects on the hydrologic system (both quantity and quality) and the plan to minimize these effects. (MK)

Response MuK 96

Section RP.8.5.3 has been revised to include discussion of expected postmine subsidence effects on the hydrologic system.

Comment SP 7

Reclamation Plan, Page RP-13. Section RP.6.2.6. In the last sentence please add that substitutions to the seed mix will be made only with WDEQ approval.

Response SP 7

Revised text in Section RP.6.2.6 as requested, the statement will now read "In the event that seed for primary species is not available, alternatives will be considered which match the life form and morphology of the primary choice only with WDEQ approval."

Comment SP 8

Reclamation Plan, Page RP-16. Section RP.6.4.1. To demonstrate that all of the unaffected acres of each vegetation community are sufficient for an extended reference area please create a table with total acres and affected acres and reference this table in this section.

Response SP 8

Table RP.6-6 has been created to display the number of extended reference acres for the respective vegetation communities. The text in Section RP.6.4.1 has been revised to include a reference to the newly created table.

Comment SP 9

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please add to the Ch. 4 reference in the first sentence on this page that the Handbook of Approved Sampling and Statistical Methods for Evaluation of Revegetation Success on Wyoming Coal Mines.

Response SP 9

Revised Section RP.6.4.1 as requested.

Comment SP 10

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please remove the first sentence in the third paragraph. It appears in conflict with the next sentence which cites Ch. 4.Sec. 2(d)(ii)(B).

Response SP 10

Removed sentence as requested in Section RP.6.4.1.

Comment SP 11

Reclamation Plan, Page RP-19. Section RP.6.4.5.1. Please add a third sentence to the first paragraph to Pastureland land use with a full shrub density greater than 1 shrub/m2 is also eligible.

Response SP 11

Sentence including pastureland land use as eligible added to Section RP.6.4.5.1 as requested.

Comment SP 12

Reclamation Plan, Page RP-24. Please revise the sentence after the ● Shrub density bullet to "Additionally, a species list will be prepared" and delete the remainder of the sentence.

Response SP 12

Revised text as requested.

Comment SP 13

Reclamation Plan, Page RP-25. Section RP.6.7.3. Under Sampling Frequency in Guideline 14 the third sample may be included as part of your revegetation success (bond release) sampling which can begin in year seven. You may add more flexability to your sampling interval such as beginning year 3 or 4, with the second sampling in year 5, 6 or 7 and then the third may be year 7 – 13 and may be used for revegetation success.

Response SP 13

Revised text per recommendations.

Comment SP 14

Reclamation Plan, Page RP-29. Section RP.7.2. There is a reference to RP.8 in this section. Please correct the reference if it is not correct.

Response SP 14

Revised text to reference Section RP.6 for seed mixtures and revegetation operations.

Comment SP 15

Reclamation Plan, Table RP6.1. Could you please add a footnote listing the disturbances that are included in the 87.3 acres of Disturbance and what the disturbances will be postmining in the 56.1 acres.

Response SP 15

Added footnote describing disturbance for premining and postmining to Table RP.6-1 as requested.

Comment SP 16

Reclamation Plan, Exhibit RP.2-1. Postmining the landuse will be Grazingland and Fish and Wildlife Habitat (937.7 acres) and Cropland (3.7 acres) with 56.1 acres of disturbance, 4.9 acres of water and 11.6 acres of wetland. These landuses will match the landuses on Exhibit D1.1-1. With just minor acreage changes shown in Table RP.6-1. Since the railroad and major roads are identified and Taylor Quarry is going to be reclaimed to Grazingland and Fish and Wildlife Habitat, the Industrial commercial stippling is not needed on these areas.

Response SP 16

Revised exhibit as requested.

Other Comments

Comment MK 27

Items Requested in Electronic Format for Preparation of CHIA, 1. Please provide a CAD or ArcGIS shapefile that contains the proposed permit boundary for the Brook Mine. This file will be used to prepare maps in the CHIA. This file can be emailed to: matthew.kunze@wyo.gov. (MDK)

Response MK 27

See response to comment MK 28.

Comment MK 28

Items Requested in Electronic Format for Preparation of CHIA, 2. Please provide the baseline surface and groundwater data collected to support baseline characterization for the permit application. All data can be submitted on Excel templates (Attachments) found on the LQD website for the Coal Annual Report Format (CARF): http://deq.wyoming.gov/lqd/coal/resources/annual-report-3/.

• Please provide all surface water flow and water quality data for the following surface water stations: SM578415-SW-1, SM578409-SW-1, SM578418-SW-1, and SM578512-SW-1.

• Please provide all groundwater level and water quality data for all Brook Mine monitoring wells shown in Table D6.2-1.

Response MK 28

The electronic data requested is being compiled in the requested format and will be provided when it is completed.

From:	Muthu Kuchanur
To:	BJ Kristiansen
Cc:	Matthew Kunze
Subject:	Re: Brook Mine responses to round 1 comments
Date:	Wednesday, July 29, 2015 8:37:38 AM
Attachments:	image001.jpg

Hi Bj,

Thanks for the pdf version. Do you have an editable MS Word copy? My intent is to use the word document from the mine as the starting point for my review. Else, I can create a separate word document and maintain the consistency of my comment numbers.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Wed, Jul 29, 2015 at 8:35 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen,
>
> I attached the electronic version of the Brook Mine round 1 comment responses for your round 2 evaluation.
>
> -bj
>
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3
>
> 2100 W. 5th St.
>

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Muthu Kuchanur
Subject: RE: Brook Mine responses to round 1 comments
Date: Wednesday, July 29, 2015 9:09:39 AM
Attachments: image001.jpg

Muthu,

I will attempt to get a WORD copy of the responses. If that is unavailable, I will let you know and you will have to maintain a separate document. You will hear from me soon.

-bj

From: Muthu Kuchanur [mailto:muthu.kuchanur@wyo.gov]
Sent: Wednesday, July 29, 2015 8:38 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Cc: Matthew Kunze <matthew.kunze@wyo.gov>
Subject: Re: Brook Mine responses to round 1 comments

Hi Bj,

Thanks for the pdf version. Do you have an editable MS Word copy? My intent is to use the word document from the mine as the starting point for my review. Else, I can create a separate word document and maintain the consistency of my comment numbers.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Wed, Jul 29, 2015 at 8:35 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen,
>
> I attached the electronic version of the Brook Mine round 1 comment responses for your round 2 evaluation.
>
> -bj
>
> Bj Kristiansen, P.G.

Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Jeff Barron
To:	BJ Kristiansen
Subject:	RE: Brook Mine round 1 responses
Date:	Wednesday, July 29, 2015 10:01:10 AM
Attachments:	Compiled Round 1 Comment Responses.docx image001.jpg

---

BJ,

This should help, let me know if you need anything further

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, July 29, 2015 9:45 AM
To: Jeff Barron
Subject: Brook Mine round 1 responses

Jeff,

Do you have a WORD copy of the comments and responses from the round 1 of the Brook mine permit evaluation? Muthu would like to keep everything in the same document so his round 2 responses fit into the narrative. If not, let me know and I'll work with what we have.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Contents

Adjudication 1
Appendix D1 2
Appendix D2 3
Appendix D3 3
Appendix D4 4
Appendix D5 5
Appendix D6 14
Appendix D7 33
Appendix D8 35
Appendix D9 37
Appendix D10 38
Appendix D11 39
Mine Plan 49
Reclamation Plan 104
Other Comments 121

Adjudication

Comment AG 1

Please also provide copies of the complaint and the answer. If there are any motions that the court has ruled on limiting or deciding any of the claims or factual or legal questions originally at issue in the case, please also provide copies of the orders, the motions, the responses to the motions, and any supporting memoranda.

Response AG 1

The Applicant's position with regard to any surface interests that may be claimed by Padlock Ranch Company and/or Big Horn Coal Company is that the Applicant alone owns the sole dominant present property right to use these surface lands for the coal mining operation described in the application, as that application has been submitted and supplemented. Applicant's sole dominant surface ownership and use interest in the relevant lands derives directly from the 1954 Deed (Attachment B) and its express reservation language. Pursuant to the controlling Wyoming Supreme Court authority set out in *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986) (Attachment C), when the Applicant already owns the dominant surface use rights for coal mining on the property, then the Applicant consents to its own use pursuant to its application by submitting the application and no other surface consents can or should be required under W.S. § 35-11-406(b)(xi). As the Land Quality Division is aware, to the extent that Padlock Ranch Company incorrectly claims some surface rights on any lands described in the 1954 Deed, it necessarily could only attempt to do so fully subject to the Applicant's sole dominant surface rights to mine coal. Under the WYOMO Fuels, Inc. decision, no consent from Padlock can be required. To the extent that Big Horn Coal incorrectly claims some surface use right in this area at this time, the Applicant is proceeding with quiet title litigation (Fourth Judicial District Court, Sheridan County, Wyoming Civil No. CV 2014-372) against Big Horn Coal on this issue and has asserted its sole dominant reserved surface right to use the surface described in the 1954 Deed to mine coal there without any consent from Big Horn Coal pursuant to the WYMO Fuels, Inc. case decision. Accurate copies of the Applicant's pending summary judgment motion arguments on this issue are enclosed with this response (attachment D and E). The Applicant can and will supplement these pleadings with further documentation that is described in the pleadings upon request.

Comment AG 2

Therefore, the Division requests the Applicant to provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch Company and Big Horn Coal Company are or are not "residential or agricultural landowners" under the statutory definition in W.S. § 35-11-406(b)(xi).

Response AG 2

Please see response AG 1.

Comment DM 1

Adjudication – Appendix B2 – Groundwater Rights – There is a groundwater well that is missing in this volume. The listing is as follows:

Barbula #2

Permit No. 85631W

Location: SW NW Section 21, T57N R84W

Please add this entry to the table and to any corresponding maps.

Response DM 1

Adjudication text page WR-12 has been updated to include Barbula # 2 (P85631W) as well as Adjudication Exhibits 5 & 8.

Appendix D1

Comment BJ 1

Appendix D1, Land Use, Table D1. 3-1; It is unnecessary to list the Expired Permit category of gas well permits. Since these APDs have expired without completion there is no related activity to the site. Listing of a non-event is not required. This also applies to the NO category since this indicates that the APD was refused, thus never became permitted through WOGCC.

Response BJ 1

Revised Table D1.3-1 as requested.

Comment SP 1

Appendix D-1. Exhibit D1.1-1. The landuses defined in Chapter 1 should be used on this Exhibit. Not the entire Brook Mine Permit falls neatly into these definitions so the following comments provide guidance:

a) The railroad, primary roads, oil and gas wells, and the facilities for Taylor Quarry would be considered Industrial commercial and may be shown with the vertical line stippling. The rest of the vertical stippling should be removed.

b) The 4.5 acres of Agricultural lands would have the Land use of Cropland. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no changes are needed to the map for this land use.

c) The 12.8 acres of water might be listed under multiple landuses such as Grazingland, Fish and Wildlife habitat or Recreational. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no change is needed to the map for this land use.

d) The 4,421.8 acres remaining should be shown as Grazingland and Fish and Wildlife habitat. The legend on the map should have Fish and Wildlife Habitat added to Past and Present Grazingland landuse. The stippled area on the map will stay the same.

e) No changes are needed to the areas identified as Recreational.

Response SP 1

Revised Exhibit D1.1-1 as requested.

Comment SP 2

Appendix D-1. Text that refers to the areas mined as Industrial commercial should be revised to remove the mining. A reference to Section 1.6 on historic mining can be made in Section D1.3.1. Grazingland. The reclaimed mined lands are now being used as Grazingland. The difference between the mined and never been mined is defined as the vegetation community that is called Reclaimed. Section D1.6 discusses the historic mining of the area and the discussion on coal mining in Industrial commercial (D1.4.3) can be removed.

Response SP 2

Revised text as requested.

Appendix D2

Comment BJ 2

Appendix D2, History, There are no comments for this section of the application. The narrative is well written and comprehensive.

Response BJ 2

No response is necessary.

Appendix D3

No comments were received regarding Appendix D3.

Appendix D4

Comment BJ 3

Appendix D4, Climatology, General comment – Is there no data for climatology that is more recent than 1990? It exists, therefore needs to be represented. Please locate and include the most recent climatological data. Twenty year-old data bears little resemblance to Sheridan County climate today so characterization of the present climate with a 20 year gap is problematic. Please reevaluate the data in light of locating and use more recent information.

Response BJ 3

Revised wind, relative humidity, and degree day data to reflect period between 1990 and 2013. Note, as can be observed by updated data, little change occurred in averages reported for wind, relative humidity, and degree days. Therefore, the wind rose provided in Figure D4.2-6 is deemed to still be representative of the Sheridan area. Revised Figure D4.2-1, Figure D4.2-11, Table D4.1-1, Table D4.2-2, Table D4.2-3, and Table D4.2-7 in response to this comment.

Comment BJ 4

Appendix D4, Climatology, Section D4.2.6, Why was 65°F used as the baseline temperature? Also, why were the high and low temperatures set to 86°F and 50°F respectively? Please clarify.

Response BJ 4

Revised text to clarify the choice of high and low temperatures.

Comment BJ 5

Appendix D4, Climatology, Figure 4.2-11, Are the degree days the total number of days that match the data points for the entire period from 1961 through 1990? This indicates that the data represented along the Y axis covers a period of 30 years on a daily basis. Please clarify.

Response BJ 5

Revised text with definitions of heating, cooling, and growing degree days to clarify Figure 4.2-11. Degree days are essentially a unit of measure like temperature, velocity, etc. A degree day signifies the number of degrees per day to heat or cool to a specified base temperature (most commonly 65°F). Each degree day is summed over the course of a month to estimate the total number of degree days that month. For example, July may have 0 heating degree days because all days are over 65°F, but will have cooling degree days nearly every day of the month. Figure 4.2-11 shows the average monthly degree days over the specified periods of data.

Appendix D5

Comment BJ 6

Appendix D5, Topography, Geology, and Overburden Assessment, Section D5.4.1, Paragraph 2 refers to "marginally suitable Selenium levels" as defined in LQD Guideline No.1. Guideline 1 has two separate sets of chemical quality criteria tables. Appendix 1 occurs on pages 17-21 as well as on pages 38-43. The first set of tables have been superseded by the second set of tables. Please use the tables on pages 38-43 when determining material suitability. The first Appendix 1 is being removed from the guideline.

The newer tables define the Selenium target as follows:

Suitable < 0.3 ppm

Marginal 0.3 – 0.8 ppm

Unsuitable > 0.8 ppm (dependent on premining water quality and overburden quality)

These values are established for uplands and ephemeral drainages unless it can be shown that Selenium impregnated materials will be buried above the groundwater potentiometric surface and below the reclaimed surface root zone. Other quality criteria have not changed.

Response BJ 6

Revised text as requested to reflect the revised LQD Appendix 1.

Comment BJ 7

Appendix D5, Topography, Geology, and Overburden Assessment, Figure D5.3-2, What units are expressed in the figure as the %g? Please include a footnote clarifying the measurement parameter.

Response BJ 7

Updated Figure D5.3-2 as requested.

Comment BJ 8

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-1, Are the Northings and Eastings in State Plane coordinates? It is assumed that they are but please verify this. The title at the top of the page could read Drill Hole Tabulations (State Plane Coordinates)

Response BJ 8

Updated as requested.

Comment BJ 9

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-2, Please rearrange the Lithologic and Electric logs in such a way that the Electric log immediately follows the Lithologic log. This allows for a more comprehensive examination of the data.

Response BJ 9

Rearranged logs as requested.

Comment BJ 10

Appendix D5, Topography, Geology, and Overburden Assessment, Holes R12-000 through R12-020 have the Northings and Eastings reversed. Please correct.

Response BJ 10

Updated as requested.

Comment BJ 11

Appendix D5, Topography, Geology, and Overburden Assessment, The Lithologic logs with the AMBRE designation 02, 03, and 04 do not have coordinates or elevations. Please provide coordinates and elevations for these three holes.

Response BJ 11

Updated as requested.

Comment BJ 12

Appendix D5, Topography, Geology, and Overburden Assessment, Hole R13-018 appears to have erroneous coordinates. The Northing is listed as 11,941,802. It should probably be 1,941,802. The elevation is shown as 43,887.9, where it should probably be closer to 3,887.9. Please verify and correct.

Hole R13-024 has a very high Northing at 61,941,541 and elevation at 73,885.4. These may be 1,941,541 and 3,885.4, respectively. Please verify and correct

Response BJ 12

Updated as requested.

Comment BJ 13

Appendix D5, Topography, Geology, and Overburden Assessment, A suggestion for future exploration: Ask the geophysical logger to reduce the gain on the gamma logs. The readjustment bounce on the logs makes them a bit difficult to read and interpret.

Response BJ 13

No response required.

Comment BJ 14

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-5, Pg. D5-5-4, The splitting tensile strength tests were run on four (4) samples from two (2) holes representing roof, coal, and floor conditions.

a) Why were these locations used as representative of the lithologies encountered during mining?

b) Are these few samples representative of all conditions expected to be encountered by the continuous miner (CM)?

Please elaborate and clarify the narrative. A statement must be made that strength testing will be performed on at least one set of samples per mining panel prior to use of the CM to insure that conditions are favorable for roof retention without subsidence. Lithology in this area is inconsistent and rock strength can vary accordingly. Using the data provided on the four samples tested indicates that some of the overburden from hole R13-19 is unsuitable for highwall mining, based on the CAT® Site Evaluation Tool For Highwall Miners;

(http://webtools.cat.com/globalmining/highwallminers/index.html).

Response BJ 14

Appendix D5 Section D5.3.3.2 has been updated as requested.

Comment BJ 15

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-4, Exhibits 1 – 7, Please include the drill hole locations on these isopach maps.

Response BJ 15

Updated as requested.

Comment BJ 16

Appendix D5, Topography, Geology, and Overburden Assessment, Exhibit 8, The map labeled as the isopach map of the Lower Masters bed is a contour of a surface. Please replace the contour map with the appropriate isopach map

Response BJ 16

Updated as requested.

Comment BJ 59

EXHIBITS, Addendum D5-4, Exhibit 1, The title on the map declares that this is an overburden isopach, but the bed name is missing. Please indicate which bed this map pertains to.

Response BJ 59

Updated Exhibit 1 of Addendum D5-4 as requested.

Comment BJ 60

EXHIBITS, Addendum D5-4, Exhibit 8, The name of the PDF file for this exhibit indicates that this is an isopach map of the Masters Lower coal bed. The title in the map indicates that this is the contour of the base of the Masters coal seam. Please correct the title of the PDF file.

Response BJ 60

The title of Exhibit 8 of Addendum D5-4 will be revised in the electronic copy, as requested.

Comment BJ 61

EXHIBITS, Addendum D5-6, Exhibit 1, We commend RAMACO for sampling overburden locations on 80 acre spacing. There are some gaps in the sampling plan, however, that need to have core holes drilled to fill them. The underground Coal Rules and Regulations in Chapter 7, Section 1(a)(i) are specific on ensuring that overburden geology is characterized in all locations where overburden will be removed or subsidence may occur. This essentially means that all areas above the planned coal panels need representative cores drilled to a sufficient density, approximately one hole for every quarter section of affected area. Based on that, the following locations still need to be characterized by overburden sampling:

NE1/4, sec.22, T.57N., R.84W.

NW1/4, sec.15, T.57N., R.84W.

NW1/4, sec.14, T.57N., R.85W.

SE1/4, sec.10, T.57N., R.85W.

Response BJ 61

A drilling rig was not able to enter the areas NW1/4, Sec.14, T.57N., R.85W and SE1/4, Sec.10, T.57N., R.85W. due to the steepness of the terrain, therefore no samples were obtained. Sampling data for drill holes BH 166-78 and BE 326-78 have been incorporated into Addendum D5-2 and Addendum D5-7 to characterize the overburden in Sections 15 and 22.

Comment BJ 62

EXHIBITS, Addendum D5-6, Exhibit D5.1-1, Kudos to the staff member that created this slope analysis map. It is clear and concise and the histogram is very informative. Good job.

Response BJ 62

Thank you for this comment.

Comment DS 1

Appendix D5, The Coal Rules and Regulations, Chapter 7, Section 1(a)(i)(A) states that information required for the geological description pursuant to Chapter 2, shall be as follows: for areas where surface operations and facilities will cause removal of overburden down to a level of the coal seam, all information outlined in Chapter 2. Overburden sampling has not been performed in many of the locations where overburden will be removed during the mining operations. Additional sampling will be required to assess overburden chemistry in all areas where overburden removal will occur. The intensity of sampling should be 1 core per 160 acres (per quarter section). The LQD requests sampling every 1,900 linear feet on longer proposed disturbance areas or, at minimum, two cores within shorter disturbances separated sufficiently to provide a representative characterization of the proposed disturbance.

> a. Not all overburden has been characterized during analysis. Several lenses of shallow coal mixed with partings or narrow coal seams that will not be mined were not characterized. Because all overburden must be handled so as not to negatively affect surface water, groundwater or vegetation, all overburden must be adequately characterized. Therefore, the LQD requests additional characterization of all overburden that will be backfilled into disturbed areas. It must also be stated that special handling and/or identification and use of topsoil/subsoil replacement may be required if unsuitable backfill or soil is placed within 4 feet of the surface on upland areas or within 10 feet of the surface in stream channels.

Response DS 1

Please see response to BJ 61.

Comment DS 2

Appendix D5, Section D5.4. – documentation of protocols that differ from those approved by the Administrator in Guideline 1 typically require a signed document by LQD staff, not a request for different procedure signed by the company. This issue has been discussed with other mining companies and it has been determined that documentation of approval by LQD staff will be required if sampling/analytical protocols differ from those required by standing LQD policy. Please provide documentation of LQD staff approval for the 10-ft. overburden sampling interval.

Response DS 2

See Attachment A to this response package. This has also been added to Addendum D5-6 pages 4 and 5.

Comment DS 3

Appendix D5,Table D5.4-1 and Table D5.4-2 do not provide the current approved selenium concentration limits of 0-3 ppm (suitable), 3-8 ppm (marginal) and > 8 ppm (unsuitable). Please be sure to include the current approved suitability criteria as shown in Guideline 1, page 42. This will change the conclusions of the discussion provided in the Appendix D5 text. Also, in Table D5.4-2, please provide the correct units for analytical results in mg/Kg, not mg/L.

Response DS 3

Please refer to BJ 6 response. Appendix D5 text, Table D5.4-1, and Table D5.4-2 are updated as requested.

Comment DS 4

Appendix D5, The permit application provided to LQD staff for review has duplicated data provided after the map identified as Exhibit 1 which should be deleted. The exhibit should also be better identified as Exhibit D5-1 or something similar to clarify placement in the permit application should it become separated from the document in the future.

Response DS 4

The electronic copies were provided to LQD staff for review purposes. The hard copy on file is the official version. Also, please see response to Comment DS 5.

Comment DS 5

Appendix D5, Comparisons were made between Exhibit 1, the soils map and the Mine Plan map. Distinct differences in the affected area and permit boundaries were observed. Please be sure that correct boundaries for the proposed affected area and permit area are provided on all maps. Please also provide the contour interval on this exhibit.

Response DS 5

Addendum D5-6 is a copy of the overburden sampling plan as presented to WDEQ on 8/26/2013, which referenced Exhibit 1. Therefore, no changes to the exhibit will be made.

Comment KM 2

Appendix D5, Page D 5-9 refers to samples collected from roof and floor from "many" locations throughout the permit area. However, supporting documentation appeared to be from only two borings and included two roof and one floor sample. In addition, the laboratory noted the floor sample did not have sufficient length and a correction factor was used to determine unconfined compressive strength. Additional structural analysis of the overburden, interburden and floor is required.

Response KM 2

During preparation of the MSHA Ground Control Plan additional coring of the coal and overburden will occur, data gathered from this activity will be supplied to WDEQ/LQD when it is received. Please see response to BJ 14.

Comment KM 3

Appendix D5, Please provide a discussion of the structural analysis of the overburden and interburden. The discussion shall address the potential for subsidence during and after mining.

Response KM 3

Structural analysis of the overburden, interburden, floor, and roof must be conducted for the MSHA Ground Control Plan. Information gathered for this plan will be provided when it is received. No text was updated in response to this comment. Please see response to BJ 14.

Comment KM 4

Appendix D5, Please discuss the aquifer(s) below the lowest coal seam and the potential for mining to impact these aquifer(s).

Response KM 4

The lowest coal seam targeted for mining is largely dry and is also confined by a clay layer. The underburden is not considered an aquifer therefore no impacts will occur.

Comment Muk 1

Appendix D5, Section D5.3.3.2 Overburden and Interburden, 1. This section provides a discussion of the thickness of interburden and not overburden. Please provide a discussion (or a reference) on the thickness of the overburden. (MK)

Response Muk 1

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.2.

Comment Muk 2

Appendix D5, Section D5.3.3.3 Coal, 2. On Page D5-10, there is a good discussion about the thickness of the two coal seams. Please provide a description on the depth from land surface to these coal seams. (MK)

Response Muk 2

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.3.

Comment Muk 3

Appendix D5, Section D5.3.3.3 Coal, 3. Page D5-10 states, "Monarch seam exist within isolated portions of the mine areas as shown on the geologic cross sections in Addendum D5-3 and may present a secondary target." However, Table D5.3-2 does not provide the coal quality characteristics for Monarch coal seam. If monarch seam is part of the mine plan, please include the coal quality characteristics of Monarch coal seam in Table D5.3-2 and a description of thickness and depth from land surface.

Response Muk 3

Table D5.3-2 has been updated with the coal quality characteristics for the Monarch seam. The overburden and seam thickness are included on the geologic cross-sections located in Addendum D5-3 referenced in the text.

Comment Muk 4

Appendix D5, Section D5.3.3.3 Coal, 4. Please include a discussion on Dietz (1, 2, 3) coal seams, if they are present in the mine permit boundary. If they are part of the mine plan, please include the coal quality characteristics in Table D5.3-2. (MK)

Response Muk 4

Discussion about the Dietz seams has been added in Section D5.3.3.3. These coal seams are not part of the currently proposed Mine Plan. Therefore, the quality data were not included in the table.

Comment Muk 5

Appendix D5, Section D5.3 Geology of Mine Area, 5. Please provide a description of the stratigraphic units below the Masters coal seam. (MK)

Response Muk 5

Section D5.3.3.4 has been added to discuss the underburden.

Comment Muk 6

Appendix D5, Addendum D5-3 Geologic Cross Sections, 6. Several of the geologic cross sections show UNK – unknown coal seam (Stringer). Please include a brief discussion about this stringer in Section D5.3.3.3 (MK)

Response Muk 6

Discussion about the stringers with unknown names has been added to Section D5.3.3.3.

Comment Muk 7

Appendix D5, Addendum D5-4 Isopachs, 7. Please include the wells/drill holes (control points) used to interpret the isopachs and elevation contours in the maps. In addition, label all the control points with names and the thickness (or elevation, as appropriate). This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Response Muk 7

Addendum D5-4 Exhibits 1 to 8 have been updated with drill hole locations as requested. A reference to Addendum D5-2 has been added to the exhibits for seam name and thickness.

Comment Muk 8

Appendix D5, Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table, 8. Please describe these analyses, methodology, results and provide an interpretation of their applicability to the mine/reclamation plan. (MK)

Response Muk 8

Please see response to BJ 14.

Appendix D6

Comment BJ 17

Appendix D6, Hydrology, Section D6.2.3, Pg. D6-20, Narrative in the last paragraph – why were no samples taken in Hidden Water Creek? Please explain.

Response BJ 17

No flow was observed in Hidden Water Creek during baseline sampling, so no samples were taken. The text has been revised to reflect that there were no flows observed.

Comment BJ 18

Appendix D6, Hydrology, Table D6.1-8, Regarding the HEC-RAS modeling results – The values for Hidden Water Creek and Slater Creek are identical. Is this accurate or is it a typographical error? Please clarify.

Response BJ 18

Updated table to remove typographical error.

Comment BJ 19

Appendix D6, Hydrology, Addendum D6-7, The well construction summary sheets need to have the coal bed names listed on the well lithology sections to the right of the well diagrams. Please label accordingly.

Response BJ 19

Updated as requested.

Comment BJ 20

Appendix D6, Hydrology, Attachment D6-8-A, Pg. D6-8-20, A statement is made that water within both coal seams is expected to be "high quality" and "good" water. Please define the meaning of those characterizations. Are these judgments based on MCLs or some other value? Are they being classified by some constituent values? Or is there another metric being used? Please clarify.

For example; referencing WQD R&R, Chapter 8, Table I, Class I,II, or III would better define the essential characteristics of the water quality. Numerical values of critical constituents, such as TDS, could also serve to define the quality as "good". More descriptive qualifiers are needed to judge the water quality.

Response BJ 20

Revised text as requested.

Comment BJ 21

Appendix D6, Hydrology, Attachment D6-8-E, Hydrographs, The x parameter, time, is depicted in days. It appears that this scale should have been adjusted to show time in hours due to the rapid changes seen in the hydrographs. Please use a finer scale for the x axis.

Response BJ 21

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-36a and D6-8-37a. These additional hydrographs detail the water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 22

Appendix D6, Hydrology, Attachment D6-8-F, The above mentioned comment can also be applied to the Carney well hydrographs. Please adjust the x axis to hours.

Response BJ 22

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data as well. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-39a and D6-8-40a. These additional hydrographs detail the water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 23

Appendix D6, Hydrology, Addendum D6-9, Pg. D6-9-2, Please include a column in Table D6-1 that indicates the elevation of the bottom of the well or TD. The total water column is important when assessing groundwater characteristics. Please correct.

Response BJ 23

Table D6-1 has been revised as requested.

Comment BJ 24

Appendix D6, Hydrology, Addendum D6-10, Pgs. D6-10-28 through D6-10-53, On the sample analysis reports, Please provide a brief narrative at the beginning of the lab results to give context to the data. Footnotes on the pages refer to MCLs or other parameters of water quality used for classification. However, the context that is used to define these parameters is missing. The assumption is made that these quality values are derived from the WQD R&R, Chapter 8, Table I definitions. But that is

uncertain as no frame of reference is given. A brief sentence or two at the beginning of the section would clarify the numerical standards used in the report. Please adjust the narrative accordingly.

Response BJ 24

Page D6-10-27a was added to provide the requested narrative.

Comment BJ 25

Appendix D6, Hydrology, Please include the lithology of the sampled zone, either in the sampling information sheets, or on the sample analysis reports. Identification of the lithology sampled needs to be readily available with the analysis. This applies to all increments sampled. The sampled zones do have identification on the sample sheets with a shorthand nomenclature but persons unfamiliar with the lithology of the prospect area would be at a disadvantage when evaluating the sample results. A simple reference table at the beginning of the section would be sufficient. Foe example; MST=Masters, CRN=Carney, AL=Alluvium. Non-geologists need some frame of reference. Please create a clarifying narrative.

Response BJ 25

Reference text with abbreviations defined has been added on page Addendum D6-10-27a, as requested.

Comment DM 2

Appendix D6-Hydrology, D6.1x – The drainage basin description and surface water quantity sections are lacking detail. As mentioned in M. Kunze's comments, the data from the terminated Slater Creek USGS gauge, and historical monitoring data from Big Horn Mine (permit no. 213) should be included.

The data collected at the monitoring stations that is presented in Addendum D6-4 does not appear to agree with the statement that Slater Creek is a "predominantly ephemeral" stream. Please reconcile the text with the data.

Response DM 2

Peak flow data from the USGS gage station on Slater Creek has been provided. See response to MK 30. The text in Section D6.1.5.2 has been updated to clearly indicate that Slater Creek is an ephemeral stream.

Comment DM 3

Appendix D6-Hydrology, D6.2.4 States that Groundwater Rights are in Appendix E2 of the Adjudication Volume. Groundwater Rights are actually listed in Appendix B2. Please Correct.

Response DM 3

Text revised as requested.

Comment KM 5

Appendix D6, 2. The pre-mining potentiometric map for the Masters coal seam shows the elevation of the groundwater at a higher elevation than the surface elevation in Sections 11 and 12 (in the vicinity of Slater Creek outside of the permit area). Either show the potentiometric surface as doted across this area or revise the potentiometric lines such that the groundwater elevation is below the ground surface elevation. Issue addressed by BJ Kristiansen. Please see comment No. 65.

Response KM 5

Exhibits D6.2-2 and D6.2-3 have been revised as requested.

Comment KM 6

Appendix D6, 3. The groundwater elevation for the Carney coal seam in monitor well 578417-CRN was given as 3795.59. The potentiometric contour for 3800 is drawn south of this monitor well. Please correct the contour line to be consistent with the groundwater elevation shown for monitor well 578417-CRN. Correction of this contour line may also adjust how the contour lines for 3780 and 3760 are drawn, such that they may be drawn consistent with other contour lines.

Response KM 6

Contours in Exhibit D6.2-3 have been revised as requested.

Comment KM 7

Appendix D6, 4. Page D6 8-8: The text refers to the pump test in the Carney coal seam. According to the procedures in the previous section, transducers were placed in CRN and CRN-OB; however on the referenced page, it states transducers remained in MST and MST-OB after pumping. LQD believes this to be a typographical error.

Response KM 7

LQD is Correct, this is a typographical error. The sentence should read "After the pumping period, the transducers remained in CRN1 and CRN-OB until 8:00AM on November 16, 2013. Page D6-8-8 has been updated with the typographical error corrected and a replacement page is included.

Comment KM 8

Appendix D6, 5. Please discuss why the water levels rose in the Carney coal seam during the pump test in the Masters coal seam.

Response KM 8

This comment is addressed in comment 19 from Muthu Kuchanur.

Comment KM 9

Appendix D6, 6. What effect would a leaking pump have on the results of the pump test in the Masters coal seam?

Response KM 9

This comment is assumed to originate from the note on page Addendum D6-8-30. This note is in reference to activities that occurred immediately after the pumping test was shut off. The pump used for the pumping test did not have a foot valve. Therefore, after the pump was shut off, water in the discharge pipe immediately began to drain back into the well. The pump and piping was pulled out of the well as fast as possible and not all of the water in the pipe drained back into the well. However, the personnel conducting the pumping test were concerned that the water draining into the well would result in a rapid rise in the water level in the well and wanted to note it for the record on the field data sheet. It is estimated that less than 2 gallons of water actually drained out of the line into the well while the pump was being pulled which would result in a water level rise in the well of less than 0.25 foot. Given that the water level recovery in the well was very rapid immediately upon cessation of the pumping test (approximately 2 feet in the first ten minutes after the pumping test ended) and the early time recovery data was largely ignored for the purposes of doing the aquifer characterization evaluations, the leaking pump would not have had an impact on the results of the pumping test.

Comment KM 10

Appendix D6, 7. Please make sure all maps that are stamped are also signed and dated by the engineer, as required by regulation.

Response KM 10

All maps that are stamped will be signed and dated by the engineer as required by law. This does not include digital versions. The digital copies have been provided for WDEQ review. The hard copy is the official copy.

Comment MK 29

Appendix D6-Hydrology, Section D6.1.2 Drainage Basin Description, 3. On Page D6-2 it is stated that Slater Creek is an ephemeral stream. Aerial imagery shows a riparian area with trees and subirrigation occurring along much of the channel. PEM wetlands are also present as documented in Appendix D10. It would seem that an ephemeral stream may not be able to support these features. Please provide the justification why Slater Creek is considered an ephemeral stream, and that the stream does not contain

intermittent characteristics where it is not below the local water table for a portion of the year. (MDK)

Response MK 29

Please see response to DM2.

Comment MK 30

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 4. The USGS operated a peak flow gage on Slater Creek from 1967 to 1981 (Station No. 06299900, http://nwis.waterdata.usgs.gov/wy/nwis/inventory/?site_no=06299900&agency_cd=USGS). The gage was located just downstream of the proposed permit boundary near the confluence with the Tongue River. Please incorporate the annual peak flow data from this station into the permit application to illustrate the range of peak flows that might be expected from Slater Creek. (MDK)

Response MK 30

The text and Tables D6.1-2 and D6.1-3 have been revised to include peak flow data for USGS Station No. 06299900.

Comment MK 31

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 5. Some of the U.S. Army Corps of Engineers references cited in the text (2000, 2001) do not appear in the References Section (Section D6.3). Please add these to the references list. (MDK)

Response MK 31

The text edits have been made as requested.

Comment MK 32

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 6. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section D6.3. (MDK)

Response MK 32

The text edits have been made as requested.

Comment MK 33

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 7. Please explain in the text if the existing impoundments (stock reservoirs, old mine pits, etc.) in both the Slater Creek and Hidden Water Creek drainages were considered in the routing functions for

the HEC-HMS runoff estimates. These features would likely have an effect on attenuating peak flows. (MDK)

Response MK 33

The text has been revised to clarify the impoundments are not included the HEC-HMS model. As described, peak flow estimates should be conservatively high without attenuation of storm events by impoundments.

Comment MK 34

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 8. As the text states on Page D6-5, the HEC-HMS runoff estimates in Table D6.1-7 are higher than the Miller (2003) equation estimates. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) equation estimates.

The Miller (2003) equation for this region used, in part, data from the USGS peak flow gage on Slater Creek, so it would seem that the Miller (2003) estimates may be more reasonable. For example, compared to the HEC-HMS estimates, the 15-year record from the peak flow gage on Slater Creek would not register at anything greater than a five-year event. Furthermore, the May 18, 1978 event on Slater Creek resulted in a peak flow of 1,100 cfs, which according to the HEC-HMS estimates would only be around a 2-year event. USGS studies have shown that the May 1978 flood event was estimated to be a 100-year event on some parts of the Tongue River in this area (http://pubs.usgs.gov/pp/1244/report.pdf). (MDK)

Response MK 34

A discussion in the text has been included that speaks to why the HEC-HMS results are higher than the Miller results. Additionally, a discussion acknowledges the report by the USGS on the May 1978 flood. The Miller analysis does appear to more closely estimate the peak flowrates for flood events for the short data record on Slater Creek. However, hydraulic calculations will continue to use the HEC-HMS results because of the conservative results and the ease in comparing to the postmining hydrologic environment. HEC-HMS provides a way to change the properties of the drainage basins to reflect what will be present postmining, and the comparison between the premining and postmining HEC-HMS models quantifies the magnitude of the impact the Brook Mine will have on the hydrologic balance.

Comment MK 35

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 9. Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

Response MK 35

The locations of the surface water monitoring sites have been reported to the quarter-quarter, which is an adequate level of accuracy to report the monitoring locations.

Comment MK 36

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations,10. On Page D6-8, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

Response MK 36

The text has been revised as requested.

Comment MK 37

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 11. On Page D6-8, second paragraph, it states that increased E.Coli from samples collected in 2006 were attributable to high flows in May-June 2010. Were the samples also collected in 2010 and not 2006? Please revise this sentence. (MDK)

Response MK 37

The sentence was revised to read more clearly. The sentence was saying that samples taken in 2010 experienced an increase in E.Coli bacteria compared to the samples collected in 2006.

Comment MK 38

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 12. On Page D6-8, second paragraph, it would be informative to add that, in addition to the SCCD, other entities such as the Big Horn Mine, USGS, and WDEQ/WQD have collected water quality data on the Tongue River and Goose Creek near the proposed mine. It may also be informative to mention that sections of the Tongue River in the vicinity of the proposed mine are on the State's 303(d) list since certain uses are not supported due to impaired water quality. Goose Creek has also been on the 303(d) list in the past and a TMDL has been prepared. Information can be found at: http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/ and http://deq.wyoming.gov/wqd/tmdl/. (MDK)

Response MK 38

The text has been revised as requested. Refer to Section D6.1.5.1.

Comment MK 39

Appendix D6-Hydrology, Section D6.1.5.2 Surface Water Quantity, 13. The Big Horn Mine (WDEQ/LQD Permit 213) operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. This station was located approximately ¼ mile upstream from station SM578415-SW-1 that was installed by the Brook Mine. The LQD Hydrology Database contains mean daily flow data from this station from 1982 to 1997, although several years are missing data. Baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request or a more complete dataset may be available if requested from the Big Horn Mine. (MDK)

Response MK 39

Please see response to DM 2 and MK 30.

Comment MK 40

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 14. Please briefly discuss in the text the water quality results from Slater Creek in the context of WQD Surface Water Quality Standards for Class 3B waters (see Chapter 1 of WQD Rules and Regulations). This would reveal whether or not designated uses were being met prior to mining. The two samples from Slater Creek indicate no exceedences of Class 3B criteria, indicating uses are supported. (MDK)

Response MK 40

The text has been updated as requested.

Comment MK 41

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 15. It is understood that water was not flowing in Hidden Water Creek so the applicant could not collect a sample for baseline purposes. However, as previously mentioned, the Big Horn Mine operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. The LQD Hydrology Database contains nine water quality samples collected at this site from 1979 to 1989. Baseline characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request. (MDK)

Response MK 41

Request for information is pending. No update to the permit has occurred at this time in response to this comment.

Comment MK 42

Appendix D6-Hydrology, Section D6.1.5.4 Sediment Transport, 16. This section would be enhanced by including data from a single sediment sample collected on Slater Creek at USGS Station No. 06299900 (peak flow gage previously discussed in Comment No. 4). This sample was collected in June 1967 at a flow of 18 cfs. The TSS was 11,600 mg/L and the suspended sediment discharge was 564 tons/day. (MDK)

Response MK 42

The text has been revised to include the additional sediment sample as requested.

Comment MK 43

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 17. A rating curve developed using only the Manning equation will provide only a rough estimate of flows given the uncertainty in the Manning's roughness coefficient. It is recommended that direct discharge measurements also be taken over time to help evaluate the rating curves developed for the four monitoring sites. (MDK)

Response MK 43

The rating curves were developed for ephemeral streams that flow infrequently enough that water measurements cannot be taken at regular intervals. Manning's equation provides a reasonable and widely accepted mathematic approximation of stream flow rates.

Comment MK 44

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 18. Given the uncertainty in the Manning equation, the estimated flow rates provided in Table D6-3 and Attachment D6-5-A (Rating Tables) are reported at much too high a level of precision to be meaningful. Depending on the magnitude of the flow estimate, there should be only one or two significant figures provided. For example, 0.29 cfs = 0.3 cfs and 3,584.38 cfs = 3,600 cfs. Please revise these tables. (MDK)

Response MK 44

Summary Table D6-3 has been revised to engineering precision (no more than three significant figures). The values in Attachment D6-5-A are essentially raw data that are being reported to that magnitude to show the validity of calculations and to aid in curve development. Being raw data, the values were not revised from those previously reported.

Comment Muk 9

Appendix D6, Section D6.2.1 Regional Hydrogeology, 9. Page D6-12 states, "The potential groundwater in the formation as capable of yielding small quantities of water

for domestic and stock use". Please consider providing a range of estimates for well yields based on literature review or from the baseline data collected by the Brook Mine. (MK)

Response Muk 9

The text has been revised to indicate that coal is the only regional shallow aquifer that has a sufficient quantity of water to support domestic and stock use.

Comment Muk 10

Appendix D6, Section D6.2.1 Regional Hydrogeology, 10. The description in this section discusses only about the Fort Union formation. Please provide a description of the overlying and underlying water-bearing formations (aquifers) and describe their hydrogeologic characteristics (flow direction, gradients, aquifer properties, general outcrop locations) on a regional context. It is noted that some of the overlying formations may be dry or discontinuous within the mine permit boundary. (MK)

Response Muk 10

Section D6.2.1 has been updated as requested.

Comment Muk 11

Appendix D6, Section D6.2.1 Regional Hydrogeology, 11. Page D6-12 states, "The overburden is comprised of sand lenses, clinker and alluvial that have the potential of water bearing bodies. Due to the topography in this area, the valley cut through these deposits. Therefore, they are discontinuous and would not hold large quantities of water." It is noted that they are discontinuous and would not hold large quantities of water. Please provide additional justification for this statement by using the hydrogeologic data collected by the Brook Mine including any reference to the interpreted extent of dry zones based on drill holes, monitor wells and other applicable data. (MK)

Response Muk 11

Section D6.2.1.1 has been updated as requested.

Comment Muk 12

Appendix D6, Section D6.2.1 Regional Hydrogeology, 12. Please clarify if there were groundwater springs or seeps observed in the areas within or adjacent to the mine permit boundary. Include a discussion (or reference) on the surface water - groundwater interactions.(MK)

Response Muk 12

Section D6.2.2.5 has been updated as requested.

Comment Muk 13

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 13. Page D6-13 states, "No monitoring wells were completed in the overburden or interburden as no water was found in these units during drilling operations". This information is critical in demonstrating the overlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (both overburden and interburden) and their depths that were used to make this determination. (MK)

Response Muk 13

Section D6.2.2.1 has been updated as requested.

Comment Muk 14

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 14. Page D6-13 states, "Also one well 578409-MST-UB showed the presence of water in the underburden, while all the other wells drilled into the underburden were dry and therefore not completed as wells." Similar to the previous comment, this information is critical in demonstrating the underlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (underburden) and their depths that were used to make this determination. (MK)

Response Muk 14

Please see response to Muk 13.

Comment Muk 15

Appendix D6, Section D6.2.2.2 Aquifer Tests, 15. Page D6-15 states, "Alluvial materials were also not analyzed during the aquifer testing." The alluvial aquifer materials are one of the key factors in determining any impacts caused by mining to the alluvial aquifer. Alluvial aquifer tests will be helpful in understanding any surface water – groundwater interactions. Please provide justification for not conducting any aquifer tests in the alluvial wells. (MK)

Response Muk 15

The text in Section D6.2.2.2 has been updated.

Comment Muk 16

Appendix D6, Section D6.2.2.2 Aquifer Tests, 16. Please provide justification for not observing the groundwater level responses in the alluvial aquifer during the two aquifer tests conducted by Brook mine. (MK)

Response Muk 16

No alluvial material was present in immediate vicinity of the clusters used for the pumping tests, hence there was no alluvial aquifer to monitor. Hidden water creek located to the east of the tested well cluster would be potentially the nearest location of alluvial material, however as noted in Appendix D11 the fill material in Hidden Water Creek is more colluvial than alluvial.

In addition, as shown on the well completion summary logs in Addendum D6-7, multiple claystone intervals are located between the Carney Coal and the surface at the well cluster where the pumping tests were conducted. The top of the Carney Coal is approximately 90 feet below ground surface at the cluster well location which is approximately 50 feet below the level of any colluvial/alluvial deposits in Hidden Water Creek. Similarly, the potentiometric head in the Carney coal is some 50 feet below the level of the colluvial/alluvial deposits in Hidden Water Creek and if there were a direct hydraulic connection, there would be no water in the Hidden Water Creek colluvium/alluvium. Given the confining intervals between and the significant difference in potentiometric head between the Carney Coal and the Hidden Water Creek colluvium/alluvium, additional shallow monitoring above the Carney Coal was not necessary.

Comment Muk 17

Appendix D6, Section D6.2.2.2 Aquifer Tests, 17. Page D6-16 states, "A report of these tests can be found in Addendum D6-8 and summary tabulation of the aquifer test results is included in Table D6.2.2". Please consider including a comparison of these estimated aquifer properties with the aquifer tests conducted in other similar coal seams in the Powder River Basin (Example: Bighorn Mine). Given the number of tests conducted by the mine, this will increase the robustness of the reported estimates from the two aquifer tests. (MK)

Response Muk 17

As requested aquifer test results from Big Horn Coal Company and from the Youngs Creek Mine were added to the text.

Comment Muk 18

Appendix D6, Section D6.2.2.2 Aquifer Tests, It is noted that the aquifer tests were conducted for ~640 minutes. Will an increased aquifer test duration change the observed lack of interaction between the coal seams and the underburden? Please clarify with a brief description. (MK)

Response Muk 18

Given the head differences between the static water levels in the Carney Coal, Masters Coal, and the underburden it is unlikely that additional pumping would have resulted

in any impacts to the water levels in the underburden. As shown on Table D6-2, (page Addendum D6-8-13) the initial water level in the Carney Coal was approximately 11.5 feet higher than the water level in the Masters Coal and the initial water level in the Masters Coal was approximately 9 feet higher than the initial water level in the underburden well. If there were a hydrologic connection between the aquifers, it is likely that the water levels in the aquifers would have already come into equilibrium.

Comment Muk 19

Appendix D6, Section D6.2.2.2 Aquifer Tests, 19. The referenced Addendum D6-8, Table D6-2 shows an increase in water levels in two of the Carney coal seam observation wells during the Masters coal seam well pumping test. Please provide an explanation for this increase in water levels during the aquifer test. (Noordbergum effect?). (MK)

Response Muk 19

Upon review of the raw data collected during the pumping test it was noted that the drawdowns reported in Tables D6-2 and D6-3 were incorrectly reported. Replacement tables are included with this round of comment responses. As shown on the updated version of Table D6-2, the water level in both Carney observation wells (CRN-1 and CRN-OB) increased by 0.23 feet during the Masters coal pumping test. While the Noordbergum effect or other natural phenomena such as earth tides could have potentially influenced the water levels in adjacent aquifers during the pumping test, the increase in water levels can be largely attributed to barometric pressure changes. Water levels in the Carney observation wells were monitored using hand held electric lines and there were no adjustments for barometric pressure reported in Table D6-2. No site specific barometric data was collected during the pumping test period. However, to evaluate how barometric pressure changes may have impacted water levels in the wells, barometric data from the automatic weather observing station (AWOS) at the Sheridan County airport was obtained from the National Oceanic and Atmospheric Administration (NOAA) database. Barometric data from the Sheridan County Airport AWOS site was compared to water level measurements in Attachment D6-8-K. The data in Attachment D6-8-K demonstrates a clear correlation between barometric pressure and water level variations in the Carney coal monitor wells during the Masters coal pumping test. Generally over the course of the Masters coal pumping test the barometric pressure went down (roughly 0.31 feet). A decrease in the barometric pressure is expected to result in an increase in water levels in a confined aquifer like the Carney coal aquifer which is what was observed.

Similar increases in water levels were also noted in the Masters Coal observation wells (MST-1 and MST-OB) during the Carney pumping test as noted on Table D6-3. Attachment D6-8-K demonstrates a clear correlation between decreasing barometric pressure and rising water levels in the Masters coal observation wells during the Carney Pumping test. In addition, during the Carney coal pumping test, water levels

in the Masters coal observation wells were still recovering from drawdowns induced during the Masters coal pumping test which may also have contributed to rising water levels in the Masters coal. The increase in water level measured in the Masters coal observation wells is attributed to a combination of continuing water level recovery and barometric effects.

Only very minor water level variations in the Masters underburden well (MST-UB) were noted during both pumping tests. As shown on the well completion form in Addendum D6-7, (Page D6-7-8) MST-UB was completed in an interval that was predominately claystone and the estimated yield is less than 2 gpm. Essentially the strata in which MST-UB is completed is more of an aquitard than an aquifer. As a result, it takes a lot longer for the water levels in the well to adjust to changing atmospheric pressure because water does not enter or discharge from the formation very fast. The lack of barometric responses in the MST-UB are attributed to the fact that the low yielding aquitard in which the well is completed has a lower barometric efficiency than the wells completed in the coal aquifers.

Vented transducers utilized to monitor water levels in the both the pumping and adjacent monitor wells during each pumping test, automatically compensated for the barometric pressure effects. Therefore, barometric pressure effects did not affect the aquifer analyses that were developed based on the pumping test data.

Comment Muk 20

Appendix D6, Section D6.2.2.2 Aquifer Tests, 20. Please provide a discussion (or reference) on the role of faults in the results of aquifer tests. (MK)

Response Muk 20

As noted in Addendum D6-8, (page D6-8-9) no hydrologic boundary conditions were observed in the pumping test data. As can be seen on Exhibit D6.2-2, the 578409 well cluster is located approximately 2,100 feet south and east of the nearest mapped fault. Since neither the Carney nor the Masters coal seams are very robust aquifers and have low transmissivity values, it is not surprising that the fault would not influence the pumping test results. For example, using Theis drawdown equations and the aquifer characteristics measured in the Masters coal (transmissivity of 3.2 ft^2/day, storitivity of 0.00025, and a pumping rate of 0.5 gpm) it is estimated that it would take over 70 days of continuous pumping for a water level response greater than 0.5ft to be observed 2,000 feet away. Therefore the likelihood that the faults would have influenced the pumping test results is very low.

Comment Muk 21

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 21. Please provide some additional discussion on the premining potentiometric surface maps, including

ranges of estimated hydraulic gradients and groundwater velocity in the different coal seams/aquifers. (MK)

Response Muk 21

As requested, additional discussion on the hydraulic gradients and groundwater velocity in the coal seams were added to Section D6.2.2.4.

Comment Muk 22

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 22. Please provide a discussion (or reference) on the hydrologic effects of any adjacent operations (including past coal mining activity by historic mines and Bighorn mine) on the premining information and data. (MK)

Response Muk 22

The last paragraph in Section D6.2.2.4 describes how CBNG production has affected water levels in the eastern side of the permit area. The drawdowns resulting from CBNG production have occurred since any historic coal mining activity and have superseded any drawdowns that may have occurred due to historic mining. Therefore, no lingering hydrologic effects from past coal mining activities are present. The text in the last paragraph in Section D6.2.2.4 has been updated to describe how CBNG impacts have superseded any impacts from historic coal mining activities.

Comment Muk 23

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 23. This section provides a good discussion on the recharge areas. However, please clarify if there are any discharges from the coal seams within the permit boundary. (MK)

Response Muk 23

Within the permit boundary there are no discharges from the coal seams with the possible exception of the Carney coal on the far west side of the permit area. As shown on Exhibit D6.2-3, the Carney coal outcrops in the far western side of the permit area along the ridge tops but has been eroded away in the stream valleys. As a result, the Carney coal is perched with no real source of recharge and is generally dry. However, on the down dip side of the outcrop the coal may discharge within the permit if there is water in the coal seam to discharge. As shown on Figures MP-3-4.7-1 and MP-3-4.7-2 it was determined during the groundwater modeling efforts that most of the Carney coal within the far western side of the permit area was dry. Therefore, there is minimal (if any) discharge from the Carney coal within the permit area. Section D6.2.2.5 has been updated to clarify where discharges from coal seams may occur within the permit boundary.

Comment Muk 24

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 24. Please provide a range of estimates for recharge from precipitation to the aquifers within the permit boundary. Also, provide a discussion if this is the primary recharge mechanism for the aquifers within the permit boundary. (MK)

Response Muk 24

The estimated recharge rates from precipitation are summarized in Section 4.2.2 of Addendum MP-3. Addendum MP-3 describes recharge within the permit area in more detail than Section D6.2.2.5. A reference to MP-3 was added in Section D6.2.2.5.

Comment Muk 25

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 25. Consider providing a description of the soil properties within the permit boundary and the use of these percent soil distributions in the discussion of infiltration within the permit boundary. (MK)

Response Muk 25

The soil properties within the permit boundary are described in detail within Appendix D7. While different soil types are expected to have variable infiltration rates, the only infiltration rate that is significant for the coal aquifers is the infiltration rate assigned to the strata near the outcrop of the coal seams. Throughout the permit area the strata overlying the coal aquifer are generally dry. Therefore the primary source of recharge occurs at the outcrops. Scoria, in particular, plays a significant role in recharge of the coal seams because it usually occurs near the coal outcrop. Because of its highly permeable characteristics most of the precipitation that falls on the scoria infiltrates into the scoria where it either infiltrates into the coal or discharges along a seep line at the base of the scoria. As noted in the response to BJ Kristiansen's comment number 57, ash material between the base of the scoria and the coal seams sometimes limits how much of the water in the scoria actually comes into direct contact with the coal. Nevertheless, because a large percentage of precipitation falling on the scoria actually infiltrates into it, the scoria does provide a consistent water source for recharge into the coal outcrops. As noted in Addendum MP-3 Section 4.2.2 the scoria areas were delineated and assigned their own recharge zone because they do play a significant role in recharging the coal seams. Within the permit area, there are several locations where the coal seams outcrop as well. These outcrop areas were also assigned their own recharge zone because they also have a hydrologic connection to the coals. Since the strata overlying the coal seams to be mined in the Brook Mine are generally dry, the recharge component from the overburden to the coal is very low away from the outcrop areas. Because of the limited hydrologic interaction between

the recharge at the surface and the coal in areas away from the outcrop, site specific changes in the recharge rates based on soil type will not impact the coal aquifers. For this reason additional analysis of the infiltration properties of the soils within the permit area represents a level of detail that is not necessary to describe the hydrologic impacts to the coal aquifers from the proposed mining operations.

Comment Muk 26

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 26. Page D6-18 states, "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-8". Please revise this statement to reference the correct addendum - Addendum D6-9. (MK)

Response Muk 26

The text has been updated to read "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-9".

Comment Muk 27

Appendix D6, Section D6.2.3 Baseline Water Quality, 27. Page D6-20 states, "A piper diagram of the groundwater wells with measured values is presented in Figure D6.2-1. Please provide a discussion on the water quality types observed at each aquifer (Example: Is the water quality type variable within an aquifer? If yes, explain the potential reasons for this observed variability) based on the piper diagram. (MK)

Response Muk 27

Section D6.2.3 has been updated as requested.

Comment Muk 28

Appendix D6, Section D6.2.3 Baseline Water Quality, 28. Page D6-20 states, "The constituents that most frequently exceed the standard concentration limitations are ammonia, TDS, sulfate and manganese". Please clarify if these constituents exceed the Chapter 8 standards at *all* the monitor wells. (MK)

Response Muk 28

Please refer to the Tables D6.2-8 thru D6.2-17 for exceedances of water quality based on Chapter 8 standards. Based on the tables, the concentrations are not exceeded at all monitor wells. No text edits were made in response to this comment.

Comment Muk 29

Appendix D6, Section D6.2.4 Groundwater Rights, 29. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Cheyenne copy of the TFN does not have a sheet separator and a tab for Appendix E2 in the Adjudication volume. Please provide a sheet separator and tab for Appendix E2. (MK)

Response Muk 29

Refer to Comment DM3. Groundwater rights are provided in Appendix B of the Adjudication Volume. This text edit has been made in Section D6.2.4.

Comment Muk 30

Appendix D6, Section D6.2.4 Groundwater Rights, 30. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Please provide a summary discussion/statistics on (i) total number of water rights, (ii) number of wells, (iii) aquifer, (iv) permitted water use and other relevant summary statistics. (MK)

Response Muk 30

Groundwater rights are listed in Appendix B of the Adjudication Volume. All of the aforementioned information is listed for each water right. Due to the constantly changing nature of water rights, a summary table is difficult to construct, and due to summary statistics not being required by WDEQ regulation, a summary statistics table has not been prepared.

Comment Muk 31

Appendix D6, Section D6.2.4 Groundwater Rights, 31. Please provide a discussion (or reference) on the premine groundwater use (including the uses reported to SEO) within the permit boundary and the adjacent areas. (MK)

Response Muk 31

The premine groundwater uses as reported to the SEO within the permit boundary and the adjacent 3 miles are listed with each individual water right in Appendix B of the Adjudication Volume.

Appendix D7

Comment DS 6

Appendix D7, Exhibit D7.3.-1 was compared with Exhibit MP.1-1. As required, it appears that the soil sampling was concentrated in areas where surface disturbance is to be expected. Please provide the contour interval on the soils map. For ease of review and to prevent misinterpretation, however, the map showing sampling locations should also clearly show the locations of proposed surface disturbances instead of providing these details on separate maps which may or may not present differing scale distances.

Response DS 6

The disturbance boundary can be found on Figure D7.1-1 and as the reviewer noted on Exhibit MP.1-1. No revision to exhibit D7.3-1 has occurred in response to this comment.

Comment DS 7

Appendix D7, Page D7-4. The second paragraph of this page contains text that should be deleted. It states "If for whatever reason overall sampling intensity.....was determined to not be enough, it is proposed that any additional sampling be deferred and included a stipulation of a future pre-stripping soil assessment program." The Mine Plan and Reclamation Plan soils handling and replacement is contingent on adequate baseline sampling of the proposed area that will be affected by mining operations (topsoil balance and stockpile location planning and bond calculation). Therefore, baseline sampling for soils must be adequate prior to approval of any permit application. Please remove the inappropriate language from the Appendix D7 text. If future changes to the Mine Plan require additional soil sampling the issue will be addressed at that time.

Response DS 7

As requested, the second sentence of the second paragraph on page D7-4 has been deleted.

Comment DS 8

Appendix D7, Page D7-9. Text appears in this section that upon NRCS declaration of prime farmlands occurring in the permit area, a letter will be provided to the DEQ. A letter from the NRCS has been received and inserted in the permit declaring no prime farmlands to exist. The text, therefore, is not appropriate and should be removed.

Response DS 8

As requested, the sentence about prime farmland (the last sentence of the first full paragraph on page D7-9) has been deleted. A new reference, citing the letter received

on October 31, 2015 (negative determination of prime farmland on Ramaco permit area) has been inserted on page D7-9 and the new reference has been added to the list of references on page D7-33.

Comment DS 9

Appendix D7, WS § 35-11-415(b)(iii) and the Coal Rules, Chapter 4, Section (c)(ix) state that if topsoil is virtually nonexistent or is not capable of sustaining vegetation then subsoil or a selected spoil material may be used as a topsoil or subsoil supplement. Additionally, due to the proximity of this mine to the Tongue River, a Class 2AB stream, limits for chemical contaminants will be imposed on discharges from the permit. Therefore, for areas where unsuitable or marginal topsoil chemistry is located (e.g. Wibaux channery loam, sample R13), an alternative soil replacement material should be identified and used in reclamation. Such a commitment must also be provided in the Mine Plan and Reclamation Plan to provide evidence that such issues that could affect the condition of reclamation and/or lead to off-site impacts will be addressed.

Response DS 9

No "alternate soil replacement material" is necessary for areas of Wibaux channery loam (Map Unit Wx). The lower soil material below 8 inches of Wibaux (any "C" horizon soil substratum below 8 inches, where existent) was not recommended for salvage and would be grouped with the overburden spoil for placement purposes. This lower material had an excessive volume of hard coarse fragments (>35%) and, based on one of the three Wibaux sample sites (R13), an "unsuitable" EC and SAR value for the 8 to 15 inch depth, EC=12.8 and SAR=17.3. Two new sentences, indicating no soil salvage of Wibaux below 8 inches in depth, has been added to the soils report on page D7-26, one sentence each for Map Unit Wx and Map Unit Wx-RO. Furthermore, the amount of suitable soil available for salvage across the entire proposed disturbance area is not limiting, with a calculated weight-average of 20.2 inches. Therefore, additional "alternate soil replacement material" is not necessary.

Comment DS 10

Appendix D7, The description of Map Unit G (Bauxson Loam, sample R-19) does not show marginal selenium that occurs between 22 – 48 inch depth range which could affect the salvage depth and may require special handling of the marginally suitable subsoil.

Response DS 10

Two new sentences have been added to the last paragraph on page D7-21 stating the presence of "marginal" rated Selenium values for lower material of Bauxson loam (Map Unit G) sample site R19. Strictly speaking, "marginal" rated soil material is not

"unsuitable" and does not need to be specially handled. This lower Bauxson material has been recommended for salvage as "Subsoil", not "Topsoil'.

Appendix D8

Comment JJ 1

Appendix D8, 1. Please update the permit boundaries so that they are the same on Exhibit D8. 2-1 and Addendum D8 Map 1. I note specifically that lands should not be included within the permit boundary south of the interstate and that Section 10 TWN57N RNG85W displays different boundaries along the far west edge of the permit; it appears that the section lines are skewed between the two maps. The Addendum D8 Map 1 also is missing a sizeable amount of lands located in Section 21 TWN54N RNG84W which are included within the permit boundary of the Adjudication Exhibit 1 map. While comparing the maps I find that the maps display the same information in slightly different formats, please explain the necessity for two individual maps and at a minimum make them consistent against one another.

Response JJ 1

Baseline vegetation assessment maps have been updated to include the correct permit boundary. The discrepancy in the permit boundary is attributed to the difference in graphical representation between a USGS quad system and a PLSS system. The USGS quad system is now depicted. Exhibit D8.2-1 is a summary map for this Appendix and future updates made to this Appendix. This map will change throughout the life of the mine as future changes are incorporated. Addendum D8 Map 1 is for this Addendum and will not change throughout the life of the mine.

Comment JJ 2

Appendix D8, 2. Why does the study area not include all lands within the proposed permit boundary?

Response JJ 2

Portions of the proposed Brook Mine permit area not included within the study area were added during an October 2014 permit boundary change following completion of the baseline vegetation study. Additional studies were not conducted in these areas due to the limited size and similarity to areas within the study area. Section D8-1.1, page D8-1-5 text has been updated to explain the exclusion of these areas.

Comment JJ 3

Appendix D8, 3. The acreage displayed on Table D8.2-1 should equal that of the land permitted on the Form 11. The Form 11 displays 4,548.8 acres while the table shows 4,581.7 acres a difference of 32.9 acres. Please update either the Form 11 or Table

D8.2-1 to show the true permit acreage as it relates to the vegetation communities. Upon further review I find that Table D8-2 located on page Addendum D8-1-41 exhibits the proper acreages in relation to the Form 11, thus the values represented there may be more accurately displayed in Table D8.2-1.

Response JJ 3

Total acreage of the permit area is 4,548.8 acres as illustrated in Form 11 and Table D8-2. Table D8.2-1 has been updated to reflect the correct acreage.

Comment JJ 4

Appendix D8, 4. Table D8.2-1 states there are 56 acres of agricultural lands; however, I am unable to locate Agricultural lands north of the interstate. Please, discuss and edit the values to display true acreages in relation to the proposed permit boundary. (See comment 3 for more clarification and another table for utilization to update values.)

Response JJ 4

Agricultural Lands within the permit area total 4.5 acres and are located in Section 21 TWN54N RNG84W. Table D8.2-1 has been updated to reflect the correct acreage of Agricultural Lands and other vegetation communities within the permit boundary.

Comment SP 3

Appendix D-8 Vegetation Baseline, Page D8-3. Section D8.1.7. Guideline 2 is a non coal guideline. Please revise this sentence to reference the equation shown in Section D8-1.2.9 Sample Adequacy.

Response SP 3

Changed as requested. Additionally, Appendix D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8.1.1, page D8-1 and Section D8.3, page D8-4. Addendum D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8-1.2, page D8-1-5 and Section D8-1.9, page D8-1-38. Reference to Guideline 2 was removed from Section D8-1.2.9, page D8-1-12.

Comment SP 4

Appendix D-8 Vegetation Baseline, Page D8-4. Section D8.1.8. Please revise the second sentence to, "The EXREFA is all of the unaffected area for each native vegetation community."

Response SP 4

Changed as requested.

Comment SP 5

Appendix D-8 Vegetation Baseline, Page D8-1-8. Section D8-1.2.4. The last sentence in this section states that no sample locations occurred within the Brook Mine Permit Area. AG-13, 14, 17 and 25 are shown on Addendum: D8, Map 1 inside the permit area. Please correct this statement or the permit boundary on the Map.

Response SP 5

Baseline vegetation assessment maps have been updated to include correct permit boundary which illustrates AG-13, 14,17, and 25 are not located within the permit boundary.

Comment SP 6

Appendix D-8 Vegetation Baseline, Page D8-1-11. Section D8-1.2.8. The last sentence of the first paragraph should be revised to, "Sample adequacy was not required for species diversity and composition."

Response SP 6

Changed as requested.

Appendix D9

Comment DM 4

Appendix D9-Wildlife, Page D9-3 states that when a sage grouse confirmation letter is provided by WG&F, it will be provided to DEQ. It appears that the confirmation letter is already part of the package (Page D9-E3). Please reference the location of the letter.

Response DM 4

Page D9-3 was revised to reference Page D9-E3 as the location of the letter.

Comment WGF 1

(Appendix D9) , We recommend this report become part of the annual reporting which will ensue throughout the operation of the mine.

Response WGF 1

Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the sections of the Mine Plan where the annual wildlife report commitments are contained.

Comment WGF 2

(Appendix D9), We suggest coordinating with the USFWS regarding raptor mitigation as needed through the mining process.

Response WGF 2

The commitments to coordinate with the USFWS regarding raptors as well as T&E and other species of federal concern are provided in Section MP.18, Addendum MP-8 and Addendum MP-9 of the Mine Plan. Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references these discussions.

Comment WGF 3

(Appendix D9), We recommend mining reclamation practices consider providing suitable habitat for existing wildlife within the specifications required by DEQ-LQD.

Response WGF 3

The commitments to reclaim wildlife habitats are provided in the Reclamation Plan in Section RP.7 Wildlife Restoration. Discussion was added at the end of Addendum D9 - 1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the Reclamation Plan.

Appendix D10

Comment BJ 63

EXHIBITS, Addendum D10, The permit boundary layer on all of the exhibits covering the aquatic resource boundaries is incorrect. Please correct the permit boundary layers.

Response BJ 63

Aquatic resource inventory maps have been updated to include the correct permit boundary.

Comment DM 5

Appendix D10-Wetlands, D10-1.4 – Please include a copy of the letter requesting concurrence and jurisdictional determination sent to the ACOE At the end of the text, and reference the letter in the text.

Response DM 5

BKS Environmental Associates, Inc., on behalf of RAMACO, requested concurrence and jurisdictional determination from the USACE on May 29, 2015. A copy of the

letter sent to the USACE has been included as Attachment D10-F. Section D10-4, page D10-10 text has been updated to reflect submittal of USACE request.

Comment MK 45

Appendix D10-Wetlands, Section D10.2 Results, 19. The text may want to state when (what date) RAMACO requested the jurisdictional determination from the USACE, and include this request letter as an Addendum to Appendix D10. This would provide documentation that the request was submitted, as receipt of the USACE determination may lag behind the LQD permitting process. (MDK)

Response MK 45

See response to DM5.

Appendix D11

Comment BJ 26

Appendix D11, Alluvial Valley Floor, Section D11.1, RAMACO has requested LQD to make a determination on the nature of the drainages as potential AVF within the permit boundary as well as within ½ mile of the permit boundary. This would then entail analysis of the following drainages (distances are approximations): • Hidden water Creek – all (4 mi.)

• East Fork Earley Creek – lower 1 mile

• Slater Creek – lower 3 miles

• Tongue River – ½ mi. east of Interstate 90 and 4 mi. west of Interstate 90 at the Acme exit.

Prior to such a declaration, LQD staff will have to perform a variety of assessments designed to assist us in making a declarative statement about AVF classification. An AVF declaration will be made after in-depth study of the drainages. Such investigation will consist of, but not be limited to:

1. Field evaluation of the geomorphic and lithologic character of the drainages in question;

2. Determination of the agricultural characteristics of the stream course;

3. Examination of available bore hole logs that can be used to characterize the subsurface materials beneath the valley floor;

4. Determination of groundwater and surface water characteristics, both quantitative and qualitative, within the drainages in question;

5. Other evaluation processes that may be deemed necessary should initial findings warrant further, in-depth analyses.

Response BJ 26

Revised D11 text throughout to expand discussion on the drainages mentioned above. Incorporated previous AVF studies into Appendix D11. Information satisfying each statement can be found in the following locations as well as many other locations throughout the document:

1. Borehole logs provided in Addendum D11-3. Hidden Water Creek test pits dug by Big Horn Mine and discussed in Section D11.3 "Stream Laid Deposits."
2. Agricultural characteristics of the stream courses are discussed in Sections D11.4.2, D11.4.3, and D11.5, in particular.
3. Bore hole logs are provided in Addendum D11-3. Additional test pit and borehole information was analyzed from the Big Horn Mine Permit No. 213.
4. Groundwater and surface water characteristics are discussed extensively in Appendix D6. Potential impacts to surface water and groundwater are discussed in the Mine Plan. The water resources are generally discussed in Section D11.4.
5. Additional research has been incorporated from the Big Horn Mine Permit No. 213. Corrections and reevaluations of the AVF study have been made throughout Appendix D11.

Comment BJ 27

Appendix D11, Alluvial Valley Floor, Addendum D11-3, Some of the borehole and well logs indicate a damp or wet interval encountered during drilling. Was an attempt made to allow wet materials to produce water prior to continuation of the hole or was water noted after adding another drill steel and lowering the kelly to begin the next 20 feet of hole? Typically, after the steel has been added and the compressor is engaged, a small amount of water can be air-lifted before the rotary table begins to turn. If so, are there field notes indicating water was observed during the connection?

Response BJ 27

It is standard procedure during drilling operations to provide wet or damp intervals an opportunity to produce water. If the intervals had produced water, this would have been noted in the drilling logs provided in Addendum D11-3. There are no other separate field notes that would provide additional information. No changes to the text were made.

COMMENT MK 1

Appendix D11-AVF, Section D11.1 Introduction, 1. In the second paragraph on Page D11-1, the possible impacts of the proposed mining operation on the Tongue River

AVF are dismissed because the area is planned for facilities level disturbance only. However, the groundwater model (Mine Plan Addendum MP-3) predicts drawdown in the Tongue River alluvium, thereby possibly affecting the AVF. As discussed in subsequent comments, additional analysis and monitoring is needed to comply with LQD Coal Rules and Regulations regarding AVFs. (MDK)

RESPONSE MK 1

Revised text to reference Mine Plan Section MP.6 concerning the Brook Mine's effect on the Tongue River AVF.

COMMENT MK 2

Appendix D11-AVF, Section D11.2 Purpose and Scope, 2. On Page D11-2, please change "Wyoming Reclamation Act" to "Wyoming Environmental Quality Act". (MDK)

RESPONSE MK 2

Revised text to state "Wyoming Environmental Quality Act."

COMMENT MK 3

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 3. For identification of unconsolidated stream laid deposits, LQD Guideline No. 9 (AVF) lists two items that may be used to positively identify unconsolidated streamlaid deposits: (1) channel bars, splays, abandoned meanders, modern flood plains, or terraces, and (2) bedload or washload sediment deposited or transported in a nonbedrock channel bottom. Presumably, item (2) would be met at the streams identified within the AVF study area. However, the permit application does not address whether the channels contain geomorphic features from item (1). Please address in the text whether channel bars, splays, abandoned meanders, modern flood plains, or terraces are observed within the streams within the AVF study area. (MDK)

RESPONSE MK 3

Revised text to discuss the lack of channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs in the Hidden Water Creek, Slater Creek, East Fork Earley Creek, and Earley Creek valleys.

COMMENT MK 4

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 4. On Page D11-5, the conclusion that the materials in Hidden Water Creek valley do not meet the definition of unconsolidated streamlaid deposits, is in conflict with the conclusion from the Big Horn Mine Permit. The Big Horn Mine Permit (Appendix D6, Pages D6-151 to D6-158) describes the evaluation of unconsolidated streamlaid deposits on lower Hidden Water Creek. The permit states: "The conclusion verified from the pit observations is that

these deposits are unconsolidated and stream laid. Small isolated patches of colluvium or bedrock can be found throughout the alluvial deposits, but these characteristics do not exclude the deposit from being stream laid." Please evaluate the data and findings from the Big Horn Mine Permit before a conclusion is drawn about the absence of unconsolidated streamlaid deposits on Hidden Water Creek. (MDK)

RESPONSE MK 4

Revised text to discuss the findings of the Big Horn Mine from test pits in the Hidden Water Creek valley. Additionally, Exhibit D11.3-1 was revised to show the locations of the Big Horn Mine test pits in Hidden Water Creek in relation to both the Brook Mine permit area and the Big Horn Mine permit area. Added the Big Horn Mine Permit State Decision Document (SDD) 213-T2 to Addendum D11-2.

COMMENT MK 5

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 5. The Big Horn Mine Permit also describes subirrigation and flood irrigation studies on lower Hidden Water Creek and concludes: "Due to the lack of subirrigation and extremely low potential for flood irrigation, Hidden Water Creek is not an alluvial valley floor." Although this is in the approved mine permit, it does not appear that an explicit AVF determination for Hidden Water Creek was ever issued by the LQD, and the AVF findings in the SDDs for the Big Horn Mine Permit do not mention Hidden Water Creek. The Brook Mine Permit application should incorporate these previous AVF studies on Hidden Water Creek into Appendix D11. (MDK)

RESPONSE MK 5

See response to comment MK 4. Additionally, while the Big Horn Mine State Decision Documents do not mention Hidden Water Creek, the SDD 213-T2 states that "No other drainages are of significant size or lack the stream laid deposits necessary to be an Alluvial Valley floor within the renewal and/or amendment areas." Hidden Water Creek is located within the renewal area and was not included within the originally declared AVF area. Although it was not mentioned by name, it has been declared not to be an AVF within the Big Horn Permit Area.This SDD has been added to Addendum D11-2 and discussion added to the text in Section D11.3.

COMMENT MK 6

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 6. On Page D11-6 it is stated the three monitor wells were installed along the thalweg of Slater Creek. The transects in Exhibit D11.3-2 show that two of the wells (578513-AL and 578418-AL) are not along the thalweg but are rather upgradient of the channel. Please revise this description in the text. (MDK)

RESPONSE MK 6

Revised text to more accurately state that the monitor wells are along or near the thalweg.

COMMENT MK 7

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 7. It appears that from Exhibit D11.1-1 that subirrigation is occurring on Earley Creek within the AVF study area. Please explain why subirrigation was not mapped on Earley Creek. (MDK)

RESPONSE MK 7

Revised Exhibit D11.1-1 to show potentially subirrigated lands on Earley Creek. The text was revised in Section D11.4.2 to reflect that subirrigation potentially occurs along Earley Creek.

COMMENT MK 8

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 8. On Page D11-6, second paragraph, the alluvial/colluvial potentiometric surface is dismissed as a source of subirrigation along Slater Creek. However, the other hydrologic processes responsible for the subirrigation are not identified. Please discuss in the text why subirrigation is occurring along Slater Creek. (MDK)

RESPONSE MK 8

Revised text to discuss the presence of burn areas overlying residual coal ash bands that serve as aquacludes which prevent water from entering or escaping the coal below.

COMMENT MK 9

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 9. The cross-sections in Exhibit D11-3-2 would be improved if the active channel and any floodplains or terraces were shown. A description of the materials in the active channel bottom would also help identify unconsolidated streamlaid deposits. (MDK)

RESPONSE MK 9

Revised Exhibit D11.3-2 to show the 2-year, 24-hour flood inundation area and the location of the active channel. Data regarding the materials in the active channel bottom are presented in the borehole logs in Addendum D11-3.

COMMENT MK 10

Exhibit D11.4-1, the extent of irrigated lands shown in Sections 2 and 11 along Slater Creek may not be correct. According to the summary for the Hart Brothers Ditches

water right (permit 1317) in the SEO database, the land being irrigated under the water right has decreased to 23 acres:

> THIS FACILITY IS MADE UP OF TWO DITCHES. THE WEST DITCH HAVING A POINT OF DIVERSION IN LOT 2 AND THE EAST DITCH HAVING A POINT OF DIVERSION IN THE SENE OF SECTION 3, T57N, R85W. T57N, AND 58N, R85W HAS BEEN DEPENDENTLY RESURVEYED. REQUEST FROM PADLOCK RANCH TO ELIMINATE 67 ACRES AS FOLLOWS: 32 ACRES IN THE SWSW OF SECTION 2 - 30 ACRES IN THE NENW AND 5 ACRES IN THE NWNW OF SECTION 11 ALL IN T57N, R85W, RECEIVED AND GRANTED. REQUEST OF ELIMINATION AND PROOF OF OWNERSHIP FILED IN MISCELLANEOUS NOTICES. ADJUDICATED WITH H.H. WILLIAMS AS APPROPRIATOR. PERMIT RECORD REFLECTS SOURCE AS SLATER CREEK AND WATER STORED IN THE HART BROTHERS RESERVOIR, P60R, XR7825A, HOWEVER CERTIFICATE RECORD REFLECTS .91 CFS FOR THE IRRIGATION OF 64 ACRES. BOC PETITION II 89-4-2 BY PADLOCK RANCH WAS GRANTED TO ISSUE AMENDED CERTIFICATE C77/290A TO REDESCRIBE LANDS WITHOUT CHANGING LAND TOTALS AND TO CHANGE POINT OF DIVERSION FROM THE RECORD POINT IN THE NWNE AND SENE OF SECTION 3, 57N, R85W AND PARTIAL MEANS OF CONVEYANCE FOR 41 ACRES (.59 CFS) TO THE WILLIAMS DITCH, P8710D, C77/289A DIVERTING WATER FROM SLATER CREEK IN THE SESW OF SECTION 34, T58N, R85W AS RECORDED IN ORDER RECORD BOOK 36, PAGES 385-390 AND RECEIVED ON CD3/578A. THIS LEAVES 23 ACRES STILL IRRIGATED UNDER THIS PERMIT. LANDS SHOWN BELOW AS "AME" AND "ELI" ARE THOSE ORIGINALLY DESCRIBED UNDER THIS DITCH.

Please clarify the irrigated acreage status for the Hart Brothers Ditches water right with the SEO and revise Exhibit D11.4-1 accordingly. (MDK)

RESPONSE MK 10

Exhibit D11.4-1 was revised to more accurately capture irrigated lands on Slater Creek in Sections 2 and 11 of Township 57 North, Range 85 West.

COMMENT MK 11

Appendix D11-AVF, Section D11.4.4 Water Quality, 11. On Page D11-7, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

RESPONSE MK 11

Removed text referencing State of Montana water quality standards.

COMMENT MK 12

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 12. On Page D11-8, second paragraph, it states that Exhibit D11.1-1 shows that sufficient water supply does not exist for consistent agricultural practices in East Fork Earley Creek. However, Exhibit D11.4.1 shows a point of diversion for Earley Creek Ditch No. 1 and several areas of irrigated lands less than 40 acres in East Fork Earley Creek. As documented in Addendum D11-4, there is an adjudicated water right for irrigation in this location. So there may be sufficient water supply for consistent agricultural practices. The text needs to further expand on this discussion of East Fork Earley Creek since there is an adjudicated water right for irrigation. (MDK)

RESPONSE MK 12

Revised text to include the Earley Creek Ditch No. 1 water right, but explained that subirrigation must not be prevalent in East Fork Earley Creek because no culvert or other conveyance structure is present beneath I-90. If subirrigation was prevalent and without a conveyance structure beneath I-90, substantial amounts of water would back up against the interstate.

COMMENT MK 13

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 13. On Page D11-8, last paragraph, it states that the hay meadows along Slater Creek in Sections 2 and 11 are not within the boundaries of subirrigation or natural flood irrigation.

> (a) The areas symbolized as irrigated lands in Exhibit D11.4-1 do not necessarily correspond to hay meadows, as the imagery shows hay meadows in the SWNE, SENE, and NESE of Section 11, and the NWSW of Section 12. The hay meadows appear to correspond with the area mapped as "AG" in the Vegetation Map (Exhibit D8.2-1) in Addendum D8.
>
> (b) The irrigated area shown in Exhibit D11.4-1 near the Landen Ditch does overlap with subirrigation mapped in Exhibit D11.1-1.

Please re-evaluate the area of hay meadows along Slater Creek and revise the text accordingly. Comments No. 15 and 16 below also relate to this issue. (MDK)

RESPONSE MK 13

The text was revised in Section D11.5 to reflect the presence of limited hay meadows and overlapping of irrigation with subirrigation on the upper reaches of Slater Creek in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West. Exhibit D11.4-1 was revised to show irrigation in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West.

COMMENT MK 14

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, On Page D11-8, last paragraph, it states that, besides Hart Bros Ditches, the remaining portion of the Slater Creek valley does not contain SEO water rights. This is not the case as Exhibit D11.4-1 shows Landen Ditch in the NENW of Section 11. This water right (P11695) does not appear in Addendum D11-4. Please revise the text and add this water right to Addendum D11-4. (MDK)

RESPONSE MK 14

The text was revised in Section D11.5 to discuss the Landen Ditch water right (P11695). A copy of the Landen Ditch water right was added to Addendum D11-4.

COMMENT MK 15

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 15. The irrigated acreage for the Landen Ditch water right appears to be 18 acres for one point of use and 22 acres for a second point of use. Please add these areas to Exhibit D11.4-1. (MDK)

RESPONSE MK 15

Exhibit D11.4-1 was revised to more accurately reflect irrigated lands in the vicinity of the Landen Ditch.

COMMENT MK 16

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 16. The Hall Ditch (SEO Permit 5195), mapped in Section 11 of Exhibit D11.4.1, apparently provides irrigation water for hayfields in the NESE of Section 11 (30 acres) and the NWSW of Section 12 (22 acres). This water right does not appear in Addendum D11-4. Please add this water right to the Addendum and add the irrigated acreages to Exhibit D11.4-1. (MDK)

RESPONSE MK 16

A copy of the Hall Ditch water right (SEO Permit 5195) was added to Addendum D11-4. Exhibit D11.4-1 was revised to depict irrigated lands in Section 12, Township 57 North, Range 85 West. The text in Section D11.5 was revised to discuss the Hall Ditch water right.

COMMENT MK 17

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 17. Portions of Earley Creek and East Fork Earley Creek are within the AVF study area yet the permit application does not attempt to conclude if these streams contain AVFs. Presumably, the LQD will need to make an AVF finding on these streams. (MDK)

RESPONSE MK 17

See response to Comment BJ 26. Additional discussion has been added to aid WDEQ in the AVF findings of East Fork Earley Creek and Earley Creek. Both valleys are upstream of mining activities proposed by RAMACO such that no material damages are expected to either valley.

COMMENT MK 18

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 18. The first bullet for Slater Creek on Page D11-9 dismisses the positive identification of unconsolidated stream laid deposits because a layer of colluvial material was found over alluvial material. However, as stated in Appendix D5 on Page D5-8 and Page D5-9, sub-rounding of the clinker present in the cuttings suggests water driven deposition of limited extent. Also, as discussed in Comment No. 3, the application did not evaluate unconsolidated streamlaid deposits in a manner that is consistent with identification criteria listed in LQD Guideline No. 9. The application has not provided sufficient evidence that unconsolidated stream laid deposits are not present along Slater Creek. (MDK)

RESPONSE MK 18

See response to Comment MK 3. The discussion on the Slater Creek valley has been further expanded to include the absence of unconsolidated stream laid deposits such as channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs. Exhibit D11.3-1 clearly indicates the presence of undifferentiated alluvium and colluvium (Qac) in the Slater Creek valley.

COMMENT MK 19

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 19. The third bullet on Page D11-9 for Slater Creek should be clarified that the width of natural flood irrigation in the valley is generally insufficient to provide for economic agricultural practices. However, economic agricultural practices clearly occur immediately upstream of the proposed mine permit boundary because of artificial flood irrigation of hayfields adjacent to the channel. These practices are documented by existing water rights that are approximately 100 years old. Please revise this discussion. (MDK)

RESPONSE MK 19

The text in Section D11.6 of Slater Creek's third bullet was revised to include the irrigated hayfield upstream of the permit boundary.

COMMENT MK 20

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 20. The fifth bullet for Hidden Water Creek on Page D11-9 seems to dismiss the positive identification of

unconsolidated stream laid deposits because of colluvial material with shallow bedrock. However, as previously noted, this conflict with information in the Big Horn Mine permit concerning unconsolidated stream laid deposits on Hidden Water Creek. (MDK)

RESPONSE MK 20

Refer to response of Comment MK 4. The Big Horn Mine permit boundary has been added to Exhibit D11.1-1. The text in Section D11.6 has been updated to include a summary of the discussion stating that the Big Horn Coal Permit No. 213-T2 SDD determined the limits of the AVF, and no portion of Hidden Water Creek was determined as being AVF.

COMMENT MK 21

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, Although the LQD has not yet issued its formal finding, the segment of the Tongue River adjacent to the proposed permit area, which was not declared under previous LQD findings, likely contains an AVF.

> (a) If this AVF is significant to farming, the applicant must comply with LQD Coal Rules and Regulations Chapter 3, Section 2(d)(ii) and demonstrate that the proposed mining operations will not materially damage the quantity and quality of water that supplies the Tongue River AVF. The absence of direct mining on the Tongue River AVF does not relieve the requirement of assessing the probable hydrologic impacts of the proposed operation to the AVF, particularly since the groundwater model in Mine Plan Addendum MP-3 predicts drawdown in the Tongue River alluvium. (MDK)
>
> (b) Regardless of the significance to farming, the applicant must also maintain and/or restore the essential hydrologic functions of the Tongue River AVF. The applicant must therefore identify the essential hydrologic functions of the Tongue River AVF and either (1) provide an analysis that the proposed operation will not hamper the essential hydrologic functions, or (2) demonstrate that the essential hydrologic functions will be restored. The essential hydrologic functions for another part of the Tongue River AVF are described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27), so this may be a good starting point to consider. (MDK)
>
> (c) A monitoring system is also required to demonstrate the essential hydrologic functions are maintained, as per LQD Coal Rules and Regulations, Chapter 5, Section 3(b)(ii). Since the groundwater model (Mine Plan Addendum MP-3) predicts 2.5 feet of drawdown in the Tongue River alluvium, the monitoring

system may likely contain alluvial monitoring wells and periodic evaluation of color-infrared imagery. (MDK)

RESPONSE MK 21

Revised text as requested. Revised text by adding information regarding the essential hydrologic functions of the declared AVFs (Tongue River and Goose Creek) from the SDD in Addendum D11-2. Also, added portion of text to describe possible monitoring system and plan for the AVFs that may be affected.

COMMENT MK 22

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, 22. The essential hydrologic functions of the adjacent Goose Creek AVF must also be maintained during the proposed mining operation. The application needs to list these functions, as described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27). A monitoring system is also required to demonstrate that the essential hydrologic functions will be maintained. (MDK).

RESPONSE MK 22

See response to comment MK 21.

Mine Plan

Comment BJ 28

Volume 11, Mine Plan, Section MP.1.2.1, pg. MP-4, Tunnel and pillar widths are discussed in general terms. Please approximate a range for the widths, in feet, in the narrative to give context to the discussion.

Response BJ 28

Added text as suggested.

Comment BJ 29

Volume 11, Mine Plan, The fifth sentence, beginning with "To minimize the amount of exposure..." does not make sense. Please rewrite the sentence for clarity.

Response BJ 29

Added text as suggested.

Comment BJ 30

Volume 11, Mine Plan, The narrative also references figure MP.1-3 as a general schematic of the highwall mining operation. The figure depicts significant vertical

highwalls above the mining operation. The text mentions that the highwalls will be vertical where the Masters and Carney converge but the illustration depicts conditions where the coal seams appear to be separated by a considerable thickness of parting. It is our experience that vertical highwalls in the Powder River Basin are unstable and should be discourage wherever possible. What would the maximum thickness of burden approximate where the vertical highwalls will exist? Please include an average on the schematic as has been done for pit width and bench width.

Response BJ 30

The figure has been updated to include the average depths.

Comment BJ 31

Volume 11, Mine Plan, Pages MP-3 and MP-4, These pages describe the highwall mining operation in vague generalities. The narrative states that the continuous miner will advance into the working face to a depth of 2,000 feet. The manufacturer's specifications for the ADDCAR system state that the depth of a cut is 1,600 feet. Is this a discrepancy of 400 feet or is there a difference in mining tools and the ADDCAR system comes with multiple depth capacities. Please clarify.

Response BJ 31

Conversations with ADDCAR representatives indicates that they will be able to extend the range of the highwall mining system so cuts up to 2,000 feet can be achieved.

Comment BJ 32

Volume 11, Mine Plan, A general word of guidance – Ramps are mentioned in the narrative as designed to an 8% grade. The Cat 777 can generally handle this grade fairly well under most conditions. The Mack Titan trucks, however, may be problematic under certain conditions. Entering the pit on the ramp could be difficult for the Mack trucks with pups if the ramp has been watered to control dust. The overburden materials used for ramp systems are generally silty with a clay matrix and overwatering can create slipping hazards for vehicles. A truck with multiple trailers will have difficulty navigating these conditions. A 6% ramp under these situations is strongly advised.

Response BJ 32

Revised text as suggested.

Comment BJ 33

Volume 11, Mine Plan, The narrative describes the tunnel width as variable, depending on the cutting head chosen. Please indicate approximate footages of the tunnel widths. For example, Bucyrus and Joy manufacture continuous miners that

have heads ranging from 11 to 12 feet in width. A mention of those widths would clarify the narrative. Also the protective coal pillars are described but have no dimensions indicated. The pillar width to tunnel width is crucial so an approximation of the remnant pillars width in feet is required. Please include approximate widths for tunnel and pillar widths.

Response BJ 33

See response to Comment BJ 28. The text has been updated as requested.

Comment BJ 34

Volume 11, Mine Plan, Section MP.1.2.2, The dozer push method of overburden removal is not adequately described. Though Figure MP.1-4 does depict the dozer push materials to some extent, the overlapping nature of the multiple lift system can be confusing to some. The narrative on page MP-4 is too brief. Please elaborate further on the dozer push staging and overburden removal. Perhaps an illustration that depicts the dozer removal in stages would be more appropriate. This can be accomplished by creating a series of illustrations rather than only one. Please clarify the methodology.

Response BJ 34

Revised text as requested. Created Figure MP.1-5.

Comment BJ 35

Volume 11, Mine Plan, Section MP.1.4, Pg. MP-5, The last sentence does not make sense. Please rewrite the sentence.

Response BJ 35

Removed last sentence for clarity.

Comment BJ 36

Volume 11, Mine Plan, Section MP.4.2.3, Pg. MP-15, The discussion of temporary topsoil stockpiles describes creating a ring ditch around the topsoil pile if there is a potential for water erosion during the 2 week to 6 month life of the pile. Since the climate is unpredictable and subject to rapid changes, temporary topsoil stockpiles (2 weeks to 6 months) will be required to have ring ditches in all cases with no qualifiers. LQD writes more violations concerning inadequate topsoil practices than any other issue. Rewrite the narrative to indicate that all temporary topsoil stockpiles will have a ring-ditch and berm created for piles having a life of 2 weeks or more. Keep in mind that even a short-lived topsoil stockpile could generate a violation if a sudden rainstorm were to erode the soil and waste it on the surrounding terrain. RAMACO may want to allow for this as well

Response BJ 36

Updated text as requested.

Comment BJ 37

Volume 11, Mine Plan, Section MP.4.3.4, Pg. Mp-17, A swell factor of 16% is being used to convert bank cubic yards to loose cubic yards. The number was generated from information attained from Big Horn Coal (PT213). Where was this information located? Many of the coal mines in the northwestern corner of the Powder River Basin use a swell factor of 13% - 14% since the overburden material is finer grained, with a higher clay content than mines on the eastern margin of the basin. Please cite the use of a 16% swell factor.

Response BJ 37

Revised text as requested. Table MP.4-9 provides typical swell and load factors of materials.

Comment BJ 38

Volume 11, Mine Plan, Section MP.6.1, Pg. MP-39, The second paragraph discusses surface runoff attenuation during mine years 4 and 5. The peak flow rates for precipitation events will be attenuated by the mining trenches that lie perpendicular to the flow in the local drainages. What flow events are expected to be attenuated by the trenches? Will the 2 year, 10 year, or 100 year events be considered as an average event? Please modify the narrative, in general terms, to define which precipitation event will be used when designing the pit drainage plans.

Response BJ 38

Updated text as requested.

Comment BJ 39

Volume 11, Mine Plan, Section MP.8, Pg. MP-47, The narrative mentions that potable water will be hauled to the mine an placed in a cistern. Why is a cistern system being considered for potable water instead of a reverse osmosis unit? The local residents use such systems as do the mines. How large of a cistern will be used for water storage? Please modify the narrative to expand on the rational behind using a cistern.

Response BJ 39

The text has been revised. The final potable water system has not been determined.

Comment BJ 40

Volume 11, Mine Plan, Section MP.9.9, Pg. MP-52, When pre-dug mud pits are to be used for exploration drilling, the topsoil must be protected from contamination by removal and stockpiling. The pit location must be stripped to the base of the soil with an areal extent that allows the pit materials to be stacked as spoil without encroaching on native surface. Reclamation shall occur in a manner that will best restore the surface to its pre-disturbance condition. These contingencies need to be better described in the narrative. Please modify the text to reflect the aforementioned conditions.

Response BJ 40

Revised text as suggested.

Comment BJ 41

Volume 11, Mine Plan, Section MP.18, Pg. MP-68, The second paragraph discusses the speed limits that will be set on haulroads to protect wildlife. Approximately what speed limits will be used?

Response BJ 41

Updated text with a 45 MPH Speed Limit.

Comment BJ 42

Volume 11, Mine Plan, Section MP.20, Pg. MP-69, The brief description of underground mining should state that no "conventional" underground mining will occur. Highwall coal recovery is an underground mining technique, but no personnel work underground. Thus the mining is modified underground mining.

Response BJ 42

Revised text as requested.

Comment BJ 43

Volume 11, Mine Plan, Section MP.24, Pg. MP-70, The word "Operation" is misspelled in the title (OPERTATION).

Response BJ 43

Revised text as requested.

Comment BJ 44

Volume 11, Mine Plan, Section MP.25, Pg. MP-71, The second paragraph, third sentence, discusses requiring additional permitting. The word "additional" is misspelled (addidtional).

Response BJ 44

Revised text as requested.

Comment BJ 45

Volume 11, Mine Plan, TABLE MP.1-1, The total disturbance should read 895 acres, not 775. Please correct the table.

Response BJ 45

Revised text as requested.

Comment BJ 46

Volume 11, Mine Plan, FIGURE MP.1-3, The average width of the pit floor and safety bench have average widths indicated on the drawing. Please insert the average heights of the vertical highwalls in these situations.

Response BJ 46

Revised Figure MP.1-3 requested.

Comment BJ 47

Volume 11, Mine Plan, FIGURE MP.1-4, The cross section, as drawn, is confusing. It would appear that dozer pushed, loose material significantly exceeds the bank material available in the highwall. The figure is not drawn to scale but a more accurate attempt to represent dirt volumes would be appreciated. Also, the cross section itself does not make sense in the way that operational steps are illustrated. A series of cross sections over time would be much more beneficial to define the appearance of the dozer push. Please modify the figure accordingly. A sample of an idealized schematic is attached. It is volumetrically accurate.

Response BJ 47

Figure MP.1-4 has been updated to add clarity.

Comment BJ 48

Volume 11, Mine Plan, FIGURE MP.4-3, Pg. MP-F7, What is the narrow, vertical rectangle located in the center of the coal stockpile coming from the stacker?

Response BJ 48

The figure MP.4-3 has been updated to remove the rectangle

Comment BJ 49

Volume 11, Mine Plan, Addendum MP-3, Pg. MP-3-2, The introductory paragraph states that the Brook Mine is approximately 6 miles northwest of Sheridan, Wyoming. However, in earlier narrative, the mine is said to be 6 miles south of the Montana border and 8 miles northwest of Sheridan. This passage is found in the Land Use Appendix D1-1. The distances should be uniform in all instances throughout the narrative.

Response BJ 49

Revised text as requested.

Comment BJ 50

Volume 11, Mine Plan, Addendum MP-3, Section 2.3, Figures 2.3-1 and 2.3-2 show the potentiometric surfaces for the Carney and Masters coal beds. The contours daylight and appear to be in mid-air over the Slater Creek drainage. Please adjust the contours so they terminate at the outcrop.

Response BJ 50

Revised Figures 2.3-1 and 2.3-2 in Addendum MP-3-17 as requested.

Comment BJ 51

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-3, The second to last paragraph indicates that the depth of the penetration by the continuous miner will be 2,000 feet. Is this an approximation since the listed depth for the ADDCAR device is 1,600 feet. Please clarify the discrepancy.

Response BJ 51

Based on communication with ADDCAR's representative 2,000 ft penetration is achievable. Generally, users of the ADDCAR system encounter increasing depth of cover with greater penetrations requiring wider web pillar between holes. The loss in recovery due to the wider pillars potentially negates any production gain from increased penetration.

Comment BJ 52

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-4, The discussion in this sections centers around the necessity of maintaining a straight, even cutting depth to prevent pillars from being cut too narrow to hold up the roof material and

allow subsidence. The 1:1 ratio suggested by NIOSH is acceptable as long as roof strength tests bear up (no pun intended) the use of the general guidelines. A small sample of tests have been run on roof and coal rock intervals and those tests have been reported. LQD requests a narrative placed either in this location of the text or other location of RAMACO's choosing that discusses the strength tests results as it pertains to roof stability. Also, a commitment must be made in the document to sample roof material for strength testing for at least one location in every panel that will mined by the continuous miner prior to mining. Our concern rests with the competence of the overlying lithologies and their possibility for subsidence. This has been a problem in this area for decades and care must applied to characterize roof materials accurately.

A sampling plan to test compressive strength above each coal panel must be submitted prior to permit approval.

Response BJ 52

RAMACO must submit and have an approved MSHA Ground Control Plan that contains the strength test and commitments requested. RAMACO will provide this information when it is received and include it in the Subsidence Control Plan.

Comment BJ 53

Volume 11, Mine Plan, Addendum MP-6, Please provide the data used as input for the ARMPS-HWM program.

Response BJ 53

The following input values were used in the ARMPS-HWM programp: compressive strength of coal - 660 psi, rock density - 162 lbs/ft3, abutment angle of 21°

Comment BJ 54

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-2, The scale of the photograph is too large to adequately depict the zones of surface subsidence from the old underground mines. Please blowup the scale to allow for clear visibility of the subsidence.

Response BJ 54

Cardno selected the larger scale to show that subsidence was limited to a small portion of the deep mine and not visible over other areas of the deep mine due its increased depth of cover. See revised figure in revision to Cardno's Subsidence Report

Comment BJ 55

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-3, This figure is very effective. It clearly shows the subsidence evident on the air photo as it correlates to

the old underground map superimposed on it. One problem, though, is that the air photo base needs to be darker, with greater contrast. The photo is a bit washed out and manipulation of the brightness/contrast aspects of the photo would help its visibility greatly. Please recalibrate the photo tonality.

Response BJ 55

See revised figure in revision to Cardno's Subsidence Report

Comment BJ 56

Volume 11, Mine Plan, Addendum MP-8, Section MP-8.5.4, The last sentence in this section indicates that there is no suitable habitat available for the Northern Long-Eared Bat. Does this include the climax Cottonwood Forest along Tongue River? The well developed understory along the river is suitable for Long-eared bat habitation though none have been located in this area. Or does the negation of the existence of the bat only apply to the area in the hills above the river where the mining will occur. Please clarify the area that was considered for potential Long-Eared Bat occurrence.

Response BJ 56

The text was revised to clarify.

Comment BJ 64

EXHIBITS, Mine Plan, Exhibit MP.1-1, The patterns used to depict surface disturbance from year to year are too similar. It is difficult to differentiate between year 0 and year 2, for example. Please recreate the surface disturbance layers to be more unique. The overburden removal sequence map (Exhibit MP.4-4) is a good example.

Response BJ 64

Revised Exhibit MP.1-1 as requested.

Comment DM 6

Mine Plan, MP.3.1.3 – A primary haul road appears to cross the Tongue River using the bridge that is currently in place from previous mine usage. Please discuss any updates needed for that bridge to be adequate for the intended usage.

Response DM 6

The revised primary haul road alignments do not cross this bridge and the use of this bridge for haul trucks and other traffic associated with the mine is not planned. Updated Exhibit MP.3-1.

Comment DM 7

Mine Plan, Exhibit MP4-3 shows Overburden Stockpiles OB-12 and OB-13, and Topsoil Stockpile TS-6 being located directly in the Slater Creek channel, without any mention of redirecting slater creek, or otherwise preventing the hydrologic consequences of damming up the creek with Overburden and Topsoil stockpiles. Please correct.

Response DM 7

Revised Exhibit MP.4-3 as requested with OB-12 and 13 as well as TS-6 moved out of slater creek channel.

Comment DM 8

Mine Plan, MP.7 – Because of the proximity of the planned facilities primarily in T57, R84 Sec.15 to the Tongue River and Goose Creek, I would like to see surface water monitoring upstream of these facilities on Goose Creek and Tongue River, and downstream of these facilities on Tongue River. Please discuss the feasibility of fulfilling this request, with reasoning.

Response DM 8

Revised text as requested. Revise Exhibit MP.7-1 with USGS stream gage location that is within the viewing area.

Comment DS 11

Mine Plan, 11) Depending upon the outcome of required overburden sampling, commitment for special handling of unsuitable overburden will be required to assure that placement of unsuitable materials so as not to hinder plant growth or to adversely affect surface or groundwater quality will be required in the Mine Plan.

Response DS 11

See section MP.4.6.1, fourth paragraph.

Comment DS 12

Mine Plan, 12) Does RAMACO provide a better detailed description of the topsoil salvage and handling process than that discussed in section MP.4.2.1? The description provided is not detailed so as to provide a description of the equipment used, the methods for assuring adequate soil salvage, or whether topsoil and subsoil salvage will follow the recommendations in Appendix D7 for stockpiling topsoil separate from subsoil. (Map Unit A Cambira Loam, Map Unit B Zigweid Loam, Map Unit C Forkwood Loam, Map Unit G Bauxson Loam, Map Unit H Haverdad Loam, Map Unit U Ulm Clay Loam) Please understand that topsoil and subsoil may only be mixed

if both meet Guideline 1 suitability criteria. Please include more detail for topsoil salvage and handling or let the LQD know where the information may be accessed.

Response DS 12

Revised text as requested.

Comment DS 13

Mine Plan, 13) Section MP.4.2.3 all topsoil stockpiles, even those stockpiled temporarily or windrowed at the edge of a disturbance, must be identified by a topsoil sign from initiation of the salvage operation as required under Chapter 4, Section (c)(D) that states that signs must be in place at the time stockpiling is begun. Therefore, the text in the first paragraph of this section stating that signs will not be required must be corrected. Signs will always be required to identify all salvaged topsoil and must be placed on all approaches to the topsoil and no more than 150 feet from the stockpile location.

> a. Additionally, all stockpiled topsoil, even windrowed along the edge of a disturbance, must be protected against wind and runoff erosion, compaction or potentially toxic materials no matter what the longevity designation of the stockpiled material. The Mine Plan must provide a commitment to these requirements.

Response DS 13

Revised text as requested.

Comment DS 14

Mine Plan, 14) Section MP.4.2.4(4.2.1?) does not discuss topsoil salvage during winter months. Salvage during the winter months, especially of shallow soil profiles, is discouraged by the LQD due to a lack of depth control caused by varying depths of permafrost. Please provide discussion concerning this subject.

> a. Even short term and temporary topsoil stockpiles must be identified on maps and the volumes accounted for in annual reports. Several criteria that must be considered are well established for placement of topsoil stockpiles and include:
>
> > i. Construction of stable areas to minimize wind and water erosion
> >
> > ii. Stockpiles will not be placed in areas where runoff water can contribute to the loss of topsoil (side hills or drainages)
> >
> > iii. Stockpiles will not be constructed on unsuitable backfill locations
> >
> > iv. Stockpiles will have associated sediment control established in advance of construction

v. Stockpiles will not be constructed at locations of known cultural or wildlife resources for which protection or mitigation is required.

b. Other topsoil stockpile construction and maintenance considerations include:

i. Stockpiles will be constructed with slopes of 3h:1v or less

ii. Bypass ditches, berms or equivalent may be used to divert runoff around stockpiles

iii. Stockpiles that will remain for less than 1 year may be revegetated or treated with urface roughing methods such as ripping or discing to reduce runoff and wind erosion potential.

Response DS 14

Revised text as requested.

Comment DS 15

Mine Plan, 15) Section MP.4.2.7, page MP 4-5. Aside from operation of soil salvage equipment with the potential for soil contamination due to blown hydraulic hoses or small fuel leaks, the LQD expects not contamination of soil during the mining operation. Contamination of subsoil and overburden is more likely. The LQD recommends that RAMACO re-phrase the section header and text to show petroleum contaminated materials being and not soils.

a. What criteria will RAMACO use to determine if spills require reporting to the DEQ, and what process will be used in spill reporting?

b. What will the operational procedure be for management of the proposed on-site landfarm for contaminated materials, and where will it be located? Will it be identified on the ground by a sign?

Response DS 15

Revised text as requested.

a. See Section MP-4.5.2 of Addendum MP-4
b. See Section MP-4.5.3 of Addendum MP-4

Comment DS 16

Mine Plan, Section MP.4.2.8. Please provide a detailed description for the disposal of empty drums, not just a citation of the EPA Rule which is probably not know by most readers of this public document.

Response DS 16

The EPA Code Federal Regulation cited is public information which may be accessed online or at a public library if the reader desires to know the specifics requirements and steps regarding container disposal.

Comment DS 17

Mine Plan, MP.4.3.1 discusses overburden removal processes. However, little detail is given to explain the actual process for overburden handling. Will the first cut be stockpiled and used to fill the last cut? When special handling is required, which is almost certain given the nature of some overburden and the need for some soil replacement materials, what assurance will be made that poor quality materials will be safely located in the backfill or in separate stockpiles, or that topsoil substitutes will be handled and stored as topsoil in a useful manner as required under Chapter 4, Section 2(b)(x)(A)? Please provide a more detailed overburden handling plan. Perhaps some of these details are observed in later sections. Please provide additional details not provided elsewhere.

Response DS 17

See Sections MP.4.3.5, MP.4.6 and MP.4.7. Revised text as requested.

Comment DS 18

Mine Plan, Section MP.4.3.4. The volumetric analysis shown in Table MP.4-4 and MP.4-5 may change depending on results of required additional overburden sampling and volumetric analysis. If the overburden depth overlying coal changes as a result of additional sampling, the volumetric analysis will also change. If post mining contour changes are necessary due to adjusted swell factors permit revision will probably not be required until the changed PMT exceeds plus or minus 20 feet of the approved at which time a Reclamation Plan revision will be required. This kind of detail should be included in the permit commitments.

Response DS 18

Revised text as requested.

Comment DS 19

Mine Plan, Section MP.4.6.1. The typical overburden sampling protocol as stated in Guideline 1 calls for one sample taken every 40 square acres of the permit area. Overburden sampling for underground mining operations differs from typical coal mine sampling protocols and is stated in the Coal Rules, Chapter 7, Section 1(a)(i)(A) which calls for overburden sampling and characterization on areas where surface operations will cause removal of overburden down to the level of the coal seam. Please

make changes to the text accordingly and perform additional overburden sampling where required.

Response DS 19

Revised text as requested.

Comment DS 20

Mine Plan, Section MP.4.3.5. A statement was made in this section that "Overburden stockpiles will only block ephemeral drainages if runoff control and sediment control measures are made and approved by WDEQ/LQD." Placement of overburden in ephemeral drainages will require a discussion of how water will be diverted around the overburden stockpile to prevent impoundment of water in addition of a discussion of sediment control measures for the stockpile to prevent of-site impacts of erosion down-slope from the stockpile. The LQD recommends that no overburden stockpiles be placed in ephemeral drainages.

Response DS 20

Revised Exhibit MP.4-3.

Comment DS 21

Mine Plan, Tables MP.1-1, MP.1-2 and MP.4-1 must show the actual years for proposed progressions, or the year 1 progression must be tied to a specific year in the Mine Plan text.

Response DS 21

Revised tables as requested. Added note saying that Year 0 corresponds to the year 2016

Comment DS 22

Mine Plan, Tables MP.4-3 and MP.4-5. Topsoil volumes appear to be underestimated in TS- 2, TS-6, TS-10 and TS-11 while underestimating the proposed volume in TS-1. Also overburden volumes appear to be underestimated in OB-4, OB-7, OB-11, OB-14 and OB-15, and overestimated in OB-16, which may affect estimates presented in TableMP.4-4 as well.

Response DS 22

Volumes are estimated based on the stripping volumes and available backfill area with excess material going to and from stock pile for contemporaneous reclamation. No updates will occur in response to this comment.

Comment DS 23

Mine Plan, Exhibit MP.4-2 and MP.4-3 must show the dates (actual years) for the salvage of topsoil and removal of overburden, or year 1 must be tied to an actual year when operations will begin (2016, 2017, etc.). The map or tables in the Mine Plan must provide proposed years and volumes for stockpile construction as well.

Response DS 23

Revised Exhibits as requested. Added note saying that Year 0 corresponds to the year 2016 on all Exhibits with years.

Comment DS 30

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30

Revised Exhibits as requested.

Comment DE 1

Mine Plan, Figure MP.1.2 and page MP-3 – MSHA and best practices may require a safety berm on this safety bench which could require a wider bench. Figure MP.1.2 notes a minimum of 35' but the text on page MP-3 just states the bench will be 35' wide. There is a real possibility this safety bench might be used for light plants so it may need to be wider for access and small vehicle use as well as providing a safety bench.

Response DE 1

Revised text as requested.

Comment DE 2

Mine Plan, Table MP.1-1 – The total disturbance doesn't seem to match the overall disturbance listed for the trench mining and facilities. Please explain or correct.

Response DE 2

Revised table as requested.

Comment DE 3

Mine Plan, Section MP.2.3, page MP-9 – The 1st sentence would be better if it started, "The explosive materials…". The 2nd sentence should replace the word "detonating"

with “explosive”. The 5th sentence in the 2nd paragraph should include cast boosters. The 6th sentence in the 2nd paragraph should discuss storage of emulsions, water gels, and slurries also. This section should also commit to proper signage of the explosive storage area. Please correct.

Response DE 3

Revised text as requested.

Comment DE 4

Mine Plan, Section MP.5.7.5, page MP-34 – The word “of” in the 2nd line of the last paragraph should be “or”. Please correct.

Response DE 4

Revised text as requested.

Comment DE 5

Mine Plan, Section MP.6.1, page MP-39 – The 1st sentence of the 1st full paragraph needs some improvement so it reads properly and makes sense. Please correct.

Response DE 5

Revised text as requested.

Comment DE 6

Mine Plan, Section MP.14.2, page MP-55 – The 2nd paragraph discusses the use of “cast primers”. The term should be “cast boosters” as it doesn’t become a primer until the detonator is added or detonating cord is attached to it. The discussion of priming holes should describe the use of a cast booster and how it is made-up to become a primer, i.e. with detonating cord or a detonator (blasting cap). Please correct.

Response DE 6

Revised text as requested.

Comment DE 7

Mine Plan, Section MP.14.3.2, page MP-56 – In the 2nd line the item “(primer with detonator)” should be changed to “(cast booster with detonator)”. Please correct

Response DE 7

Revised text as requested.

Comment DE 8

Mine Plan, Section MP.14.3.2, page MP-56 – The 2nd paragraph discusses powder factors in coal and overburden and the high end of the ranges is extremely high for the type of rock and coal in this area. RAMACO should eliminate the range and simply state powder factors will be adequate to effectively fragment the overburden and coal.

Response DE 8

Revised text as requested.

Comment DE 9

Mine Plan, Section MP14.3.3, page MP-56 – RAMACO should reword this to say that initiation will be done using non-electric or electric systems, which may include electronic detonators, shock tube detonators, detonating cord, electric detonators or a combination of these. Igniter cord is used to initiate safety fuse and it's highly unlikely that any safety fuse will be used at this mine. Please correct.

Response DE 9

Revised text as requested.

Comment DE 10

Mine Plan, Section MP.14.4, pages MP-56 & 57 – It is probable that emulsions will also be stored on site so it should be mentioned since emulsion/ANFO blends are the most widely used product in wet holes. Please correct.

Response DE 10

Revised text as requested.

Comment DE 11

Mine Plan, Section MP.14.6, pages MP-57 & 58 – Residents who request a pre-blast survey must make the request to the permittee and the Administrator of Wyoming Land Quality Division (LQD). The permittee is responsible for getting the pre-blast survey done and distributed to the person that requested it and the LQD Administrator. Please correct.

Response DE 11

Revised text as requested.

Comment DE 12

Mine Plan, Section MP.14.7, pages MP-58 & 59 – LQD will not approve protecting uninhabited structures (what LQD refers to as engineered structures) at 8.0 inches

per second (ips) of peak particle velocity. LQD would allow a maximum limit of 5.0 ips. RAMACO would have to assure that this limit was not exceeded by the use of a seismograph at these structures on all blasts. RAMACO could apply for a modified scale distance factor to show compliance with this limit of 5.0 ips by submitting a vibration study and doing a regression analysis to show the allowable ppv is not exceeded at a 95% confidence level. However, this will require the vibration study be submitted with seismograph records from shots in the mining area so it cannot be done until after some blasting has been done at the mine. Please correct this text.

Response DE 12

Revised text as requested.

Comment DE 13

Mine Plan, Section MP.14.8.1, page MP-60 – The discussion on typical pattern size should be changed to more general language. Using the parameters given the powder factor used would be approximately 0.16 lbs./CY using ANFO and in the 0.23-0.25 lbs./CY range when shooting an emulsion blend. These powder factors are not high enough to adequately fragment the overburden. Please correct.

Response DE 13

Revised text as requested.

Comment DE 14

Mine Plan, Section MP.14.8.1, page MP-60 – The 2nd paragraph says if water is in the holes a slurry or water gel explosive will be used. Most likely an emulsion/ANFO blend with good water resistance will be used in wet holes and not a slurry or water gel. Please correct.

Response DE 14

Revised text as requested.

Comment DE 15

Mine Plan, Section MP.14.8.1, page MP-60 – The 3rd paragraph discusses the explosive weight per hole and the powder factors. The explosive densities listed are correct but the pounds per hole and powder factors are incorrect. In a 7.875" hole and with a density of ANFO of 0.85 g/cc the pounds/foot of hole is 17.95 lbs. and with 24' of powder column the pounds/hole is 431 lbs., making the powder factor = 0.16 lbs./CY. Similarly using an emulsion blend of 1.32 g/cc the pounds/foot = 27.87 lbs. and the pounds per hole would be 669 lbs. so the powder factor =o.25 lbs./CY. In the 50' hole described with 26' of stemming and 24' of powder the powder distribution is

poor so it would likely lead to blocky material near the top of the bench. Please correct.

Response DE 15

Revised text as requested.

Comment DE 16

Mine Plan, Section MP.14.8.2, page MP-61 – Drilling a 35' x 35' pattern in a 15' thick coal seam with a 7.875" hole and 4.5' of stemming will probably result in excessive flyrock, stemming ejection, high airblast and hard zones between the holes. Expecting to stem 4.5' is not realistic – in the field the blaster is going to try to hold for 4' or 5' of stemming. Again RAMACO discusses using slurry or water gel in wet hole when an emulsion/ANFO blend with high water resistance would probably be used. Please correct. Also the powder factor listed for coal is probably a little high so it would be better to just say that the powder factor will sufficient to fragment the coal for the prime movers. Please correct.

Response DE 16

Revised text as requested.

Comment DE 17

Mine Plan, Section MP.14.10, page MP-63 – The last bullet item says that detonation during electric storms might be a reason for unscheduled blasting. This is confusing because it makes it sound like the operator would shoot during electric storms and the only safe thing to do when an electric storm approaches is clear the pattern and keep everyone a safe distance away until the storm passes. Please correct.

Response DE 17

Revised text as requested.

Comment DE 18

Mine Plan, Addendum MP-7, Blaster's Log – Under the "Holes" heading RAMACO should use "burden" not the term "burden spacing". On the 2nd page the word "signiture" should be changed to "signature". Please correct.

Response DE 18

Revised text as requested.

Comment MK 23

Mine Plan, Section MP.20 Alluvial Valley Floors, The discussion of underground mining in AVFs does not seem necessary given there is no plans for underground mining at the Brook Mine. Furthermore, it is conceivable that circumstances could exist where underground mining of an AVF would not be allowed by the LQD. For example, if the AVF was significant to farming and underground mining of the AVF would result in surface effects such that material damage to the AVF would occur. (MDK)

Response MK 23

While no underground mining is proposed within delineated AVFs, the mine maintains this option. If underground mining is ever planned under the AVF, the appropriate revisions will be made. Revised text as requested.

Comment MK 46

Mine Plan, Section MP.4.1 Mining Sequence, 20. On Exhibit MP.4-1, please attempt to show the areas that would be highwall mined versus surface mined. These layers are currently not found until Exhibit MP.15-1. Alternatively, the text in this Section could specify that the areas to be highwall versus surface mined are shown in Exhibit MP.15-1. (MDK)

Response MK 46

Revised text as requested.

Comment MK 47

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 21. Only Slater Creek and Hidden Water Creek are labeled and shown in Exhibit MP.5-1. In order to better evaluate the Hydrologic Control Plan, please provide labels and locations for the other stream channels, including Tongue River, Goose Creek, East Fork Earley Creek, and the other unnamed channels (as shown on the USGS 24K Quad) on the proposed permit area. (MDK)

Response MK 47

Revised Exhibit MP.5-1 as requested.

Comment MK 48

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 22. Exhibit MP.5-1 shows overburden stockpiles OB-13 and OB-12, as well as topsoil stockpile TS-6, occurring directly over the Slater Creek channel. The Exhibit does not show any diversion ditches to be used in these locations. Please either move the location of the

stockpiles or present a plan to use a diversion to route Slater Creek around the stockpiles. (MDK)

Response MK 48

Revised Exhibit MP.5-1 as requested.

Comment MK 49

Mine Plan, Section MP.5.2 Sedimentation and Wastewater Impoundments, 23. Exhibit MP.5-1 shows the locations of two "sediment basins". Are these considered the same as "sedimentation impoundments", as discussed in this Section? If so, the designs for these two impoundments are not found within the Mine Plan. (MDK)

Response MK 49

The "sediment basins" shown in Exhibit MP.5-1 are not considered the same as the "sediment impoundments(reservoirs)" . Sediment Basins are considered an Alternative Sediment Control Measure and are discussed in Addendum MP-1. As such, the design for these "sediment basins" are not included in the Mine Plan. However, the design criteria and construction standards for "sediment basins" are similar to those discussed within Section MP.5.2 of the Mine Plan. Revised text as requested.

Comment MK 50

Mine Plan, Section MP.5.3 Flood Control, 24. This section discusses flood control reservoirs but it is not mentioned how many flood control reservoirs would be constructed and where their locations would be. Please provide this information to comply with LQD Coal Rules and Regulations, Chapter 2, Section 5(a)(i)(D)(IV). (MDK)

Response MK 50

Revised text as requested.

Comment MK 51

Mine Plan, Section MP.5.4 Diversions, 25. This section mentions permanent diversions, but there are no apparent plans for permanent diversions. Please discuss if permanent diversions are anticipated as part of the mining operation, or if all diversions will be temporary. (MDK)

Response MK 51

Revised text as requested.

Comment MK 52

Mine Plan, Section MP.5.4 Diversions, 26. Exhibit MP.5-1 shows only one diversion ditch for Hidden Water Creek in T57N, R84W, Section 9. Please discuss this particular diversion and its typical design in more detail in Section MP.5.4. (MDK)

Response MK 52

Revised text as requested. Add design exhibit of the Hidden Water diversion ditch.

Comment MK 53

Mine Plan, Section MP.5.5 Culverts, 27. Please provide a brief statement that commits to a periodic culvert inspection and maintenance plan to ensure that culverts will function properly over time. (MDK)

Response MK 53

Revised text as requested.

Comment MK 54

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 28. The first sentence references a sedimentation reservoir. Where is the location of this sedimentation reservoir? Are these the "sediment basins" shown in Exhibit MP.5-1? If not these sedimentation reservoirs need to be added to this Exhibit. (MDK)

Response MK 54

Revised text as requested.

Comment MK 55

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 29. The first paragraph references treating and discharging pit water. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 55

Revised text as requested.

Comment MK 56

Mine Plan, Section MP.6.1 Surface Water, 30. Exhibit MP.1-1 shows surface disturbance directly over a few areas of Slater Creek and Hidden Water Creek. Please identify the source of disturbance in these areas. Direct disturbance of the channel should be avoided unless there is a plan for a diversion to route the stream around the disturbance. (MDK)

Response MK 56

See response to Comment MK 76, 88 and 99. Revised text as requested.

Comment MK 57

Mine Plan, Section MP.6.1 Surface Water, 31. The mining trenches are often discussed with reference to Exhibit MP.1-1. However, the trenches are not shown on this Exhibit. Please add the locations of the trenches to Exhibit MP.1-1. (MDK)

Response MK 57

Revised Exhibit MP.1-1 as requested.

Comment MK 58

Mine Plan, Section MP.6.1 Surface Water, 32. On Page MP-39, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining disturbance will be treated prior to discharge. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 58

Revised text as requested.

Comment MK 59

Mine Plan, Section MP.6.1 Surface Water, 33. Please discuss the diversion ditch for Hidden Water Creek in the first carryover paragraph on Page MP-39. (MDK)

Response MK 59

Revised text as requested. See Hidden Water Creek diversion Exhibit MP.5-2 for further details.

Comment MK 60

Mine Plan, Section MP.6.1 Surface Water, 34. On Page MP-40, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining activities will be treated prior to discharge. Please reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 60

Revised text as requested.

Comment MK 61

Mine Plan, Section MP.6.1 Surface Water, 35. On Page MP-40, there is a sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility". This statement is unclear. Are the impacts to the actual Slater Creek channel or the uplands and other tributaries in the watershed? Is it reduced ground cover and increased soil erodiblity? Please provide a more explicit description of the possible impacts. (MDK)

Response MK 61

See response to Comment MK 56, 76, 88 and 99. Revised text as requested.

Comment MK 62

Mine Plan, Section MP.6.1 Surface Water, 36. Please provide a discussion on whether the proposed mining operation would affect surface water quality such that designated uses would be affected on the major streams on and adjacent to the proposed permit area. (MDK)

Response MK 62

Revised text as requested.

Comment MK 63

Mine Plan, Section MP.6.1 Surface Water, 37. The text describes possible reductions in peak flows and storm volumes. Please describe in the PHC if the proposed mining operation will have any effects on nearby or downstream surface water rights. (MDK)

Response MK 63

Revised text as requested.

Comment MK 64

Mine Plan, Section MP.6.1 Surface Water, 38. Please add a brief statement to the PHC that if it is determined that the mining operation affects a surface water right, that water right would be replaced with a water source of similar quantity and quality as provided by W.S. § 35-11-415(b)(xii). (MDK)

Response MK 64

Revised text as requested.

Comment MK 65

Mine Plan, Section MP.6.1.1 Land Erosion Stability, 39. It is unclear the intent of this section. It seems to be out of place in the mine plan, as it discusses the USLE in the

context of only native and reclaimed conditions. Furthermore, no data other than the K factors are presented in Mine Plan Tables (Table MP.6.1). The Reclamation Plan also does not discuss applying the USLE, so it would seem that Section MP.6.1.1 should be removed unless a USLE analysis is completed of pre- vs during- vs postmine erosion predictions. (MDK)

Response MK 65

Section MP.6.1.1 has been removed.

Comment MK 66

Mine Plan, Section MP.7.1 Surface Water Monitoring, 40. It is unclear why reservoirs will be monitored in the operational monitoring program when these features were not sampled for during baseline characterization. If the reservoirs have the potential to be affected by the mining operation they should be sampled prior to mining with this information presented in Appendix D6. (MDK)

Response MK 66

Revised text as requested.

Comment MK 67

Mine Plan, Section MP.7.1 Surface Water Monitoring, 41. Please add the reservoir monitoring locations listed in Table MP.7-1 to Exhibit MP.7.1. (MDK)

Response MK 67

Revised Exhibit MP.7.1 as requested.

Comment MK 68

Mine Plan, Section MP.7.1 Surface Water Monitoring, 42. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

Response MK 68

See response MK

Comment MK 69

Mine Plan, Section MP.7.1 Surface Water Monitoring, 43. Please identify what type of water quantity data will be generated from the continuous stage monitoring. For example, will mean daily flow rates and/or peak daily flow rates be estimated, as these would likely be submitted to the LQD in the Annual Report? (MDK)

Response MK 69

Revised text as requested.

Comment MK 70

Mine Plan, Section MP.7.1 Surface Water Monitoring, 44. The text in the last paragraph on Page MP-45 states that water quality samples will be collected from a single station using an ISCO automatic sampler. Please identify in the text which station this is. Also, please explain the rationale for using an ISCO sampler at only one of the four stream monitoring sites. (MDK)

Response MK 70

Revised text as requested. The station equipped with the ISCO automatic sampler was the only station equipped with such a device due to the stations location as well as expected flows. Quarterly grab samples taken at stations upstream of mining disturbances will give an accurate representation of water quality entering the permit boundary. Since the station equipped with an automatic sampler is located near the area in which Slater Creek exits the permit boundary, an automatic sampler allows the operator see if the mining activities of the Brook Mine have an impact on the water quality of Slater Creek as the highest chance water quality is affected will occur during precipitation events. An automatic recorder was not installed at the station downstream of disturbances on Hidden Water Creek because the recorded and modeled flows for the drainage are extremely low. No observable flow had been recorded on any surface water station along Hidden Water Creek, despite precipitation events having occurring. As such, any data collected by an automatic sampler on Hidden Water Creek would occur during extreme precipitation events in which the flows through Hidden Water Creek would likely have high turbidity and be an unrealistic representation of the water quality within Hidden Water Creek.

Comment MK 71

Mine Plan, Section MP.7.1 Surface Water Monitoring, 45. The text in the first paragraph on Page MP-46 states that data will be evaluated to determine if any surface water and groundwater interactions exist. It would seem that any interactions should have already been identified during the baseline characterization of the hydrological system on and near the proposed permit area. It does not appear that the permit application discusses surface/groundwater interactions. (MDK)

Response MK 71

Revised text as requested. The monitoring is a continuation of the baseline monitoring sites.

Comment MK 72

Mine Plan, Section MP.8 Water Use, 46. Please state in the text that all water from surface reservoirs or wells will be used under appropriate permits from the State Engineer's Office (SEO). (MDK)

Response MK 72

Revised text as requested.

Comment MK 73

Mine Plan, Section MP.8 Water Use, 47. It is advised that the applicant discuss with the SEO-Interstate Streams Division any implications that water use may have under the Yellowstone River Compact. (MDK)

Response MK 73

Revised text as requested.

Comment MK 74

Mine Plan, Addendum MP-6 Subsidence Control Plan, Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation, 48. The text states that subsidence monitoring would be discontinued if no evidence of subsidence occurred after six months after highwall mining. Please include a clarifying statement that the applicant would remediate subsidence up until bond release is approved, even if the subsidence was detected later than the six months of initial monitoring. (MDK)

Response MK 74

Please see revision to last paragraph of Addendum MP-6

Comment MuK 32

Mine Plan, 32. Please provide an electronic copy of the groundwater model referenced in Addendum MP-3. In addition, please provide the GIS projection coordinate of the model files that will enable the LQD to plot the model results in GIS for the purposes of producing the CHIA (Cumulative Hydrologic Impact Assessment). The LQD review of the model files might potentially generate additional comments, clarifications or questions. (MK)

Response MuK 32

An electronic copy of the groundwater model Will be provided under separate cover. The elements in the model are based on the Wyoming East Central NAD 83 state plane coordinate system. To convert from model Grid to the state plane coordinates the X

offset is 1367387.512 and the Y offset is 1915004.382. There is no rotation from the model grid to the state plane coordinate system.

Comment MuK 33

Mine Plan, MP.1.1 Type of Mine, 33. Page MP-1 states, "Below the Tongue River Member is the Lebo shale member of the Fort Union Formation which contains the Masters Seam (Cardno MM&A, October 2013)." This statement is not consistent with Table D5.3-1, Page D5-T1 and other descriptions in Appendix D5. Table D5.3-1 indicates Masters Coal seam is in the Tongue River Member. Please clarify and make appropriate changes throughout the submittal (Example: MP 4.4). (MK)

Response MuK 33

Revised text as requested.

Comment MuK 34

Mine Plan, MP.1.1 Type of Mine, 34. Major coal seams on the Brook Mine include: Dietz (1,2,3), Monarch, Upper Carney, Lower Carney and Masters.". Dietz (1,2,3) coal seam is not included in the description presented in Section D5.3.3.3, Appendix D5. Please clarify: (i) the seams that will be mined by the Brook Mine and (ii) include the description of all the coals seams as appropriate in Appendix D5 and Appendix D6. (MK)

Response MuK 34

Please refer to Mine Plan Section MP.4.4.1 for targeted coal seams at the Brook Mine.

Comment MuK 35

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, Consider using the groundwater model referenced in Appendix D-3 to provide a description for a range of estimates on anticipated dewatering rates/volumes and groundwater inflows to the mine pit. (MK)

Response MuK 35

The text in Section MP.5.8 is to indicate that water entering the pit from either groundwater or surface water will be controlled using sumps and treated prior to discharge.

Comment MuK 36

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, 36. Please clarify the anticipated effects of the faults on the dewatering plan or groundwater impacts during mining. (MK)

Response MuK 36

Since the water will be collected in a sump, treated, and then discharged, the faults should have no effect.

Comment MuK 37

Mine Plan, MP.5.9 Dewatering Wells, 37. Please provide a brief discussion on the anticipated quality of groundwater removed at various stages of mining. (MK)

Response MuK 37

Revised text as requested.

Comment MuK 38

Mine Plan, MP.5.9 Dewatering Wells, 38. If groundwater is discharged into a stream channel, anticipated discharge flow rate, water quality, and estimated seasonal discharge of the groundwater should be tabulated. The availability and suitability of this water for downstream water users should also be evaluated. Please clarify if this is an expected mechanism to discharge pumped groundwater. (MK)

Response MuK 38

Revised text as requested.

Comment MuK 39

Mine Plan, MP.5.8 Groundwater Rights, Please include a description on any expected degradation of groundwater quality caused by the mining operation (including lateral flow through spoils) in the adjudicated wells. (MK)

Response MuK 39

Revised text as requested.

Comment MuK 40

Mine Plan, MP.6.2.Groundwater, 40. Please provide a brief discussion on any hydrologic effects caused by anticipated changes in recharge to the aquifers during mining. (MK)

Response MuK 40

Revised text as requested.

Comment MuK 41

Mine Plan, MP.6.2.Groundwater, 41. Please provide an assessment of any subsidence effects (Addendum MP-6) on the hydrologic system during operations. (MK)

Response MuK 41

Revised text as requested.

Comment MuK 42

Mine Plan, MP.6.2.Groundwater, 42. Please discuss if there are any expected impacts on groundwater quality caused by subsidence. (MK)

Response MuK 42

Revised text as requested.

Comment MuK 43

Mine Plan, MP.6.3.2 Plan to Mitigate the Impacts on Groundwater, 43. If the quality or quantity of adjudicated water supplies are affected, then an alternative source should be identified as part of the mitigation plan. Please provide a statement to meet this statutory requirement (W.S. § 35-11-415(b)(xii)). (MK)

Response MuK 43

Revised text as requested.

Comment MuK 44

Mine Plan, MP.7.2 Groundwater Monitoring, 44. Please clarify the lack of any shallow monitor wells near Hidden Water Creek, Goose Creek and Tongue River alluvium and if this will be an impediment to completely characterize the groundwater impacts during mining. (MK)

Response MuK 44

Hidded Water Creek has no alluvium ttherefore, no shallow well can be installed. Goose Creek in the area of the permit is through a reclaimed mine area (pre-law) therefore there is not alluvium. As discussed throughout we will not impact the Tongue River Alluvium. RAMACO will add wells in the Tongue River Alluvium.

Comment MuK 45

Mine Plan, MP.7.2 Groundwater Monitoring, 45. Please clarify the possibility of any of the monitor wells shown in Exhibit MP.7-7 being discontinued due to any constraints in the proposed-mine plan (example: mined through). (MK)

Response MuK 45

Revised text as requested.

Comment MuK 46

Mine Plan, MP.8 Water use, 46. Page MP-47 states, "Industrial water will be obtained from groundwater wells or from water collected in sediment and flood control reservoirs." Please clarify if the groundwater wells mentioned in this statement are wells that will be exclusively used as industrial supply wells or if they are same as dewatering wells. (MK)

Response MuK 46

Revised text as requested.

Comment MuK 47

Mine Plan, MP.8 Water use, 47. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a discussion comparing the reported water use by other mines of similar size in the Powder River Basin.

Response MuK 47

No record of reported water use was discussed in the annual reports submitted to WDEQ for several different mines within the Powder River Basin. As such, a comparison was unable to be made.

Comment MuK 48

Mine Plan, MP.8 Water use, 48. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a comparison of this estimated total water use against the various estimated water sources available during mining (Example: from dewatering wells). It will be very helpful to provide a discussion on contingency measures during extreme wet/dry years or if the proposed mine plan does not require extensive dewatering. (MK)

Response MuK 48

RAMACO is currently working to solidify the necessary water right for this water. The sources and associated amounts are in discussions and therefore not presented at this time.

Comment MuK 49

Mine Plan, MP.8 Water use, 49. Please clarify if there is any expected variability in this projected water use (example: is it closely related to the mine plan). (MK)

Response MuK 49

Revised text as requested.

Comment MuK 50

Mine Plan, Addendum MP-3 Groundwater Model, 50. Page Addendum MP-3-19 states, "Since, most of the wells within the modeled domain are stock wells with intermittent pumping and completed in geologic strata below the Masters Coals, they are relatively inconsequential to the groundwater system modeled in this report." Please provide a Figure (or reference) to show these wells, their depths and discuss on why they are hydrogeologically isolated from the effects of the proposed mine. (MK)

Response MuK 50

All the groundwater rights are tabulated within Appendix B of the adjudication volume and Exhibits 5 and 8 in the adjudication volume show the locations of each respective groundwater right. Please note that adjudication Exhibits 5 and 8 include monitor wells in addition to stock and domestic wells so all the wells shown on the exhibits are not necessarily wells that are being used as water supply wells. In fact, almost all the completed water wells shown on Exhibit 5 of the adjudication volume within the Brook Mine permit area are actually monitor wells. The Cross Sections presented in Exhibit 2 of Addendum D5-3 show the depth of the coal seams at various locations within the Brook Mine Permit. For comparison, the depths of each well are listed in the tabulation in Appendix B of the adjudication volume.

The statement on Page MP-3-19 "they (the wells) are relatively inconsequential to the groundwater system modeled in this report" means that the wells are not believed to be significant stressers to the groundwater system because of their relatively low pumpage rates. This statement should not be interpreted to mean that all of the stock and domestic wells in the area are hydrologically isolated from the coals proposed for mining within the Brook Mine Permit area. In fact, Section 4.9 of Addendum MP-3 specifically describes 26 wells that, based on their depths and locations, are likely completed within the coals. The expected impacts to these wells were assessed as part of the modeling exercise. Based on a comparison between the reported depths in the water rights tabulation in Appendix B of the adjudication volume and the geologic cross sections in Addendum D5-3, the other stock and domestic wells in the area were determined to be completed either in the Tongue River alluvium, or deeper strata below the Carney coal and do not have a direct hydrologic connection to the coals proposed for mining in the Brook Mine and were not specifically evaluated in the groundwater model.

Along the eastern edge of the model domain there are a large number of CBM wells and, based on available data presented in the water rights tabulation in Appendix B of the Adjudication volume, these wells are likely pumping water from the Carney and Masters coal seams. The impacts from the CBM wells are described in detail within

later sections of the report. However, the text on page MP-3-19 does not speak to the CBM wells. Minor changes to the text on page Addendum MP-3-19 and additional explanatory text have been added to this page to provide further clarification.

Comment MuK 51

Mine Plan, Addendum MP-3 Groundwater Model, 51. Page Addendum MP-3-20 states, "The faults are significant in lateral extent and form natural no flow boundaries". Please provide a discussion (or refer to a discussion) on how these faults were determined to be no flow boundaries. (MK)

Response MuK 51

Faulting within the permit area was mapped by B.E. Barnum on the USGS Monarch Quadrangle. As noted in Section D5.3.2, Barnum indicates fault displacements on the order of 50 feet within the mine area. Lithologic logs provided in Addendum D-5-3 demonstrate that the dominating lithology in the column is claystone and coal thicknesses are less than 20 feet. This offset geology from faulting results in a claystone hanging or footwall adjacent the coal aquifer and therefore discontinuity of the aquifer and an assumed hydrologic flow boundary.

Comment MuK 52

Mine Plan, Addendum MP-3 Groundwater Model, 52. Please clarify the reason for not estimating vertical hydraulic conductivity of the interburden using an aquifer test. (MK)

Response MuK 52

Response to this comment is partially clarified in responses to MK's Comments 18 and 19 above. During the aquifer test conducted at the 578409 well cluster no response was observed across the interburden, therefore, the vertical hydraulic conductivity of the interbuden was too low to measure in the aquifer test. Furthermore, the static water levels in the Masters and Carney coal seams are different which demonstrates that the hydraulic conductivity of the interburden is very low. Therefore, literature values were utilized and adjusted within reasonable bounds to improve model calibration.

Comment MuK 53

Mine Plan, Addendum MP-3 Groundwater Model, 53. Page Addendum MP-3-25 states, "With no unnatural stresses on the system …" Please provide a discussion of the CBM impacts on the water levels. It appears that the hydrographs presented in Appendix D6 do not show the impacts of CBM. (MK)

Response MuK 53

There are multiple CBM production wells located along the eastern side of the groundwater domain. In order for the CBM producers to be able to produce gas it is necessary to significantly lower the water levels in the coal to release the gas in the coal fractures. CBM production began in this area around 1999. Therefore, it was conservatively assumed that CBM production has already resulted in lowering the water levels in the coal aquifers to the top of the coal aquifer along the eastern edge of the model domain and the general head boundaries were set accordingly to simulate this effect. Even though water level data in the coal aquifer prior to CBM production is limited because of the lack of monitor well data, prior to CBM production, the potentiometric head in the coal was estimated to be significantly higher than the top of coal.

The hydrographs presented in Appendix D6-9 do not show the impacts of CBM because they show water level changes over a one year period roughly 13 years after CBM production began in the area, and if the wells were going to be impacted by CBM, it is likely that they have already been impacted. Please note that the model assumed that CBM production would continue into the future resulting in the water levels in the coal being maintained at unnaturally low levels. Therefore, the model has conservatively estimated the combined impacts from both CBM and the proposed coal mining activities. Currently, a large majority of the CBM wells are being plugged and abandoned which may result in higher than predicted water level recovery rates in the coal aquifer.

Text edits were made to page MP-3-25 to help clarify the discussion.

Comment MuK 54

Mine Plan, Addendum MP-3 Groundwater Model, 54. There are two sub-sections for recharge, Section 2.5.3 and Section 2.6.1. Please clarify/consolidate. (MK)

Response MuK 54

The two subsections have been combined into one subsection under Section 2.6.1

Comment MuK 55

Mine Plan, Addendum MP-3 Groundwater Model, 55. Page Addendum MP-3-26 states, "… drain cells were placed in the model to simulate seeps from the outcrops." Please provide a discussion on the evidence for seeps (or reference) observed during field surveys. Were there any field data collected on the location and flow rates of these seeps? (MK)

Response MuK 55

Evidence of seeps from outcrops can be seen in Color Infared Imagary (CIR), which is included in the permit as Exhibit D11.1-1. The areas of seepage are manifested on the CIR imagery as areas with more vegetation. Evapotranspiration from the vegetation growing along the seep removes all the water before it emanates from the formation into the drainage. Therefore, no measurements of the seepage rate at the outcrops were possible or are available. Additional discussion explaining the need for drain cells within the model is provided in Section D6.2.2. Also, text was added to Section D6.2.2 to clarify that no field flow measurements were available.

Comment MuK 56

Mine Plan, Addendum MP-3 Groundwater Model, 56. Page Addendum MP-3-27 states, "River cells from MODFLOW's river boundary conditions package were placed in the model to simulate the Tongue River and Goose Creek." Please provide a conceptual discussion supported by field observations on the type/nature of interaction of these streams with groundwater (Gaining stream vs. losing stream). (MK)

Response MuK 56

As described in Section 2.3 of MP-3, the dip of the strata in the project area is generally east-southeast into the Powder River Basin and the groundwater flow direction follows this trend regionally. As such, the Tongue River comes into contact with the coal seams of interest near the updip side of the coal seams. Interactions between the surface water and groundwater occur at those points where permeable formations sub-crop into alluvial/surface water bodies. Both the Carney and the Masters coal subcrop under the Tongue River near the western edge of the model domain. Conceptually these subcrops are the only places where the coals would be in contact with the surface water. Section 2.3 of Addendum MP-3 describes the conceptual groundwater flow in some detail.

As described in Addendum MP-3 Section 2.3, the Carney coal is largely dry to the north and west of its subcrop into the Tongue River alluvium and becomes saturated at an elevation just above the elevation where it subcrops beneath the Tongue River alluvium. Therefore it is likely that the Carney Coal would lose water to the Tongue River alluvium. The potentiometric surface in the Masters Coal is roughly the same as the potentiomentric surface of the Tongue River where the Masters coal subcrops beneath it. A review of the steady state groundwater model shows that where the River boundary cells are immediately above the Masters Coal the net effect is that the River boundary cells input approximately 3.2 gpm into the model. Conversely, near the upper and lower Carney Coal/Tongue River outcrops the River cells are taking roughly 0.16 gpm out of the model. Since the coal outcrops occur beneath the Tongue River there is no way to field verify these flows but conceptually they do seem reasonable.

The river boundary cells extend to the bottom of the layer in which they are placed as discussed in response to comment MUK 74 and MUK 84. The River boundary cells were placed in Layer 1 to the confluence of Goose Creek and the Tongue River which extends east of the area where the Carney Coal would be in communication with the Tongue River alluvium. Due to the fact that the River boundary cells extend to the bottom of the layer they do provide a conduit for the River to provide recharge into the Carney Coal even though the River would be physically separated from the coal by multiple zones of low permeability shales. The estimated recharge occurring in this area from the Tongue River to both layers 1 and 2 is approximately 8 gpm. The discharge into the coals is likely conservatively overestimated and not all of the 8 gpm would necessarily end up in the coal as some of it also discharges to layer 1. As such, the model conservatively estimates that up to 11.2 gpm would be discharged from the river to the coals or overburden between the Carney Coal and the Tongue River.

The strata located above the coal seams of interest is generally claystone with low permeability as discussed in MP-3 Section 2.2. Therefore, interaction of groundwater between these units and the Tongue River or Goose Creek is very limited. Within the model domain, the Tongue River Alluvium does have large deciduous trees and other vegetation immediately adjacent to the river. Conceptually, evapotranspiration from the vegetation along the Tongue River would indicate that through the model domain the Tongue River is a losing Stream. Throughout most of the model domain where the Tongue River is present, there low permeability overburden strata between the Tongue River alluvium and the coal seams which hydrologically isolate the Tongue River from both the Masters and the Carney coal seams. Since Goose Creek is located in the eastern portion of the model domain where the coal is significantly below the alluvium and the clay intervals are even thicker, the Goose Creek alluvium is also hydrologically separated from the Masters and Carney Coals. The Goose Creek alluvium would likely see similar losses to evapotranspiration that would be observed in the Tongue River alluvium.

Comment MuK 57

Mine Plan, Addendum MP-3 Groundwater Model, 57. Please provide a discussion on any contribution of groundwater baseflow to the major surface water bodies within the permit boundary. (MK)

Response MuK 57

As described in the response to comment MuK 56, conceptually, very little groundwater base flow from the Carney and Masters coal seams are expected to contribute to the surface water bodies within the permit boundary. The mass balance table provided in response to comment MuK 73 demonstrates that much more water is expected to enter the groundwater system from the surface water bodies (river cells) than is contributed to the surface water bodies from groundwater baseflow.

Comment MuK 58

Mine Plan, Addendum MP-3 Groundwater Model, 58. In section 3.2 MODFLOW Input Files, was aerial recharge used as an input file? Please clarify if evapotranspiration was considered as a discrete input or lumped into net aerial recharge. (MK)

Response MuK 58

Yes, the recharge package was used as an input file. Section 3.2 of Addendum MP-3 was updated to include a discussion of the recharge package. The evapotranspiration (ET) package was not utilized in the model. To address the effects of ET, the recharge rates were adjusted down in proportion to the estimated losses created by ET. Within most of the model domain where evapotranspiration would occur, the low permeability overburden between the surface and the coal seams of interest provide a hydrologic barrier so the evapotranspiration was ignored in these areas.

Comment MuK 59

Mine Plan, Addendum MP-3 Groundwater Model, 59. Page Addendum MP-3-31 states, "Layer 1 – represents the coal overburden". Please clarify if the alluvial aquifer was included in the model. Please provide justification for not considering the alluvial aquifer in the model. (MK)

Response MuK 59

As described in the responses to comments MuK 56 and MuK 57, the only place within the model domain where there is potential for interactions between any alluvial aquifers and the coal seams of interest is where the coal is directly below the Tongue River alluvium or Slater Creek colluvium. Where the coal is in direct contact with alluvium/colluvium, layer 1 (the coal overburden) was assigned a higher vertical hydraulic conductivity to allow the layer to better emulate the alluvial/colluvial aquifer in this location. This zone of higher hydraulic conductivity in layer 1 is depicted on Addendum MP-3 Figure 4.2-1. Groundwater Vistas does not allow discontinuous layers throughout the model domain so this allowed the alluvium/colluvuim to be effectively be modeled without the need to add an additional layer across the top of the entire model domain. This helped to improve the computational efficiency of the model. Since the overburden has a very low hydraulic conductivity and hydrologically separates the coals from the other alluvial/colluvial deposits within a large portion of the model domain, there is no reason to model any additional alluvial/colluvial deposits. To help clarify this comment Figure 4.2-1, was prepared and sections 2.5 and 4.2 of MP-3 have been updated.

Comment MuK 60

Mine Plan, Addendum MP-3 Groundwater Model, 60. Page Addendum MP-3-31 states, "Layer 3- Carney Interburden. This interval is generally of low to very permeability in

the western portion of the Project Area". Please clarify how the areas where Layer 3-Carney Interburden is absent are treated in the groundwater model. (MK)

Response MuK 60

Ground Water vistas does not allow discontinuous layers. Therefore, Layer 3 is continuous across the entire model domain. Where the coal seam coalesces on the east portion of the model, the Layer 3 interburden was modeled as coal by setting hydraulic properties of the layer equivalent to the values of the overlying and underlying coal seams. Additional text has been added to Section 4.2.1 of Addendum MP-3 to further describe how the hydraulic conductivities were assigned to layer 3.

Comment MuK 61

Mine Plan, Addendum MP-3 Groundwater Model, 61. Please include a discussion of the thickness of all model layers. (MK)

Response MuK 61

Addendum MP-3 Section 2.5 describes the thickness of the various coal seams. Additional text has been added to MP-3 Section 4.1 to generally describe the thickness of each layer. Following are the modeled thicknesses for each layer:

- Layer 1-The thickness for this layer varies throughout the model domain. Near the western side of the model the layer is often absent where all the strata geologically younger than the Carney coal has been eroded off. These areas are generally represented as no flow cells in the model. Within the eastern portion of the model Layer 1 can be substantial. In the model the maximum thickness of Layer 1 in the eastern side of the model domain was approximately 1,100 feet.

- Layer 2-The Upper Carney coal was modeled with a constant thickness of 7 feet throughout the model.

- Layer 3-The Carney coal interburden layer varied in thickness from 4 feet up to 15 feet within the active portion of the model.

- Layer 4-The Lower Carney coal was modeled with a constant thickness of 8 feet within the model.

- Layer 5 The Carney/Masters coal interbuden layer varied in thickness from 4 feet up to 107 feet within the model.

- Layer 6-The Masters coal was modeled with a constant thickness of 6 feet within the model.

Comment MuK 62

Mine Plan, Addendum MP-3 Groundwater Model, 62. Please include a justification for not considering the underlying zones beneath the Masters coal seam in the model. (MK)

Response MuK 62

The Masters coal is underlain by the Lebo Shale. The Lebo Shale is a thick (Appendix D5 Section D5.2.3), regional confining interval in the project area as described in Mine Plan Addendum MP-3 Section 2.1. There are no aquifer units identified within the model domain within the Lebo Shale with direct hydrologic connection to any of the elements of the model. Since the Lebo Shale is a regional confining unit, if it had been included in the groundwater model, it would have been assigned hydraulic parameters typical of a shale interval (very low hydraulic conductivity) and it would have essentially been a no flow barrier to the more permeable Masters coal above it. Groundwater Vistas treats the bottom of the model as a no flow boundary. Therefore, the Lebo Shale is for all practical purposes included in the model as a confining interval with the way the model is currently defined.

Comment MuK 63

Mine Plan, Addendum MP-3 Groundwater Model, 63. Please provide appropriate cross section(s) of the model grid overlaid with the drill hole data collected during baseline characterization. This will help the evaluation of the adequacy of model layer thicknesses against the stratigraphic field data. (MK)

Response MuK 63

As noted in Addendum MP-3 Section 4.1, the Groundwater model layers were developed from a 3D geologic model developed from drill hole data within the project area developed for the purposes of making volumetric coal estimates. Minor updates to the surfaces were made where new data provided by additional exploration drilling was completed. An additional figure was developed (Addendum MP-3 Figure 4.1-3) and included in Addendum MP-3 that depicts actual cross sections cut from the groundwater model. Addendum D5-3 of Appendix D5 includes geologic cross sections with drill hole data that can be compared back to the actual cross sections included in Figure 4.1-3 of Addendum MP-3.

Comment MuK 64

Mine Plan, Addendum MP-3 Groundwater Model, 64. Please clarify how the layers were modeled to represent the confined/unconfined aquifer types. (MK)

Response MuK 64

Groundwater Vistas has a "layer type" control that was set to #5: Confined/Unconfined, which allows the model to determine whether to use storativity or specific yield for the storage coefficient based on the elevation of the water elevation vs. formation tops. Groundwater Vistas handles the aquifer type classification without further inputs.

Comment MuK 65

Mine Plan, Addendum MP-3 Groundwater Model, 65. In addition to model calibration, please provide justification for the recharge rates applied in the model including any literature references. (MK)

Response MuK 65

The initial recharge rates utilized in the model were initially estimated based on a USGS study (Water-Resources Investigations Report 01-4278) conducted on the eastern side of the Powder River basin and the Black Hills area. The study entitled, "Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 1931-98." was prepared by JM Carter and D.G Driscoll. In the study Carter and Driscoll reported recharge rates varying from 0.04 inches per year to 2.93 inches per year. The 2.93 inch per year recharge rate was reported within the Madison limestone formation outcrops in the Black Hills while the lower range of recharge rates reported by Carter and Driscoll were estimated for areas in the eastern periphery of the Powder River Basin where the precipitation and soil types are similar in nature to the Brook Mine Permit area. Since calibrated recharge rates in the key recharge areas (the coal outcrops and the scoria outcrops) were within the range of values developed by Carter and Driscoll, the recharge rates used in the model are considered reasonable. Please note that the recharge rate throughout Layer 1 is much lower than the range of recharges developed by Carter and Driscoll. This is reasonable because much of Layer 1 has no hydrologic connection to the underlying coal seams. Additional justification for recharge rates applied in the model is discussed in response to comment BJ57.

Comment MuK 66

Mine Plan, Addendum MP-3 Groundwater Model, 66. Page Addendum MP-3-33 states, "Recharge is applied within the modeling software by applying the recharge to the highest active layer." Please clarify the presence of any modeled 'dry cells' in the model and the influence of applying the recharge to the layers below the dry cells. (MK)

Response MuK 66

As noted in the responses for comments MuK 59 and MuK 60, Groundwater Vistas does not allow for discontinuous layers across the model domain. Along the north and

the west sides of the model there is a good portion of the model domain where the upper layers have been eroded off and do not actually exist. These areas of erosion were accounted for using no flow cells. As shown on Figures 4.4-1 through 4.4-4 of Addendum MP-3, the no flow cells in the top layer are the largest in areal extent while each underlying layer has a slightly decreased areal extent of no flow cells. In this case the no flow cell distribution was adjusted to match the outcrop of each layer. The fact that the software applies the recharge to the highest active layer was taken advantage of during the modeling process, since it is an effective way to apply recharge to an outcropping layer which is under another layer that is eroded away but due to software limitations is still present in the model.

Because CBM operations have generally removed most of the water from the coal seams, there are some locations within the model domain where dry cells during the modeling have caused cells in layer 1 to go dry and the recharge is applied to the next active layer below. While this could be problematic if a high recharge rate were assigned to the model cells, generally throughout the model domain the recharge rate is very low. Therefore, this results in a very minor amount of water coming into the model and did not significantly affect the model calibration.

Comment MuK 67

Mine Plan, Addendum MP-3 Groundwater Model, 67. Table 4.2-3. lists model porosity values. Typically, MODFLOW (flow model) does not use porosity in its calculations. Please clarify the need for this input parameter. (MK)

Response MuK 67

Modflow does not utilize porosity as part of its calculations. However, other modules included in the Groundwater Vistas package such as MODPATH do utilize porosity. In the case of this model, no MODPATH simulations were conducted. Therefore, the porosity term as put into the model has no impact on the calculations. However, porosity is a hydraulic parameter of the aquifer and may be important for future modeling simulations, therefore, the porosity values developed for each aquifer/aquitard unit will be left in the model report. Minor changes to the text in Addendum MP-3 have been made to clarify the role of porosity in this model.

Comment MuK 68

Mine Plan, Addendum MP-3 Groundwater Model, 68. The faults are not modeled in Layer 1. Please clarify the procedure for determining the vertical extents of the faults in the model. (MK)

Response MuK 68

The composition of Layer 1 is predominately claystone. Because Layer 1 is not composed of aquifer material and because the hanging and footwalls are composed of

strata with similar hydraulic properties, displacement due to faulting does not substantially change the flow through the aquitard and placing Horizontal flow barriers in the model in layer 1 was not necessary.

Comment MuK 69

Mine Plan, Addendum MP-3 Groundwater Model, 69. Please provide the input parameters used to model the horizontal flow barriers in the model and discuss their technical reasonableness. (MK)

Response MuK 69

Horizontal Flow Barriers were used in the model to simulate no-flow boundaries created by faulting within the project area. Horizontal flow barriers require two input parameters in Groundwater Vistas including wall thickness and hydraulic conductivity. The input parameter used in the model for wall thickness was 10 feet and a hydraulic conductivity of 1.0 x 10^-5 ft/day was used. The horizontal flow barrier parameters as applied will essentially limit all but a very minor amount of flow across the barrier. As described in the response to comment MuK 51, the coal seams within the project area are relatively thin as compared to the fault offsets so it is reasonable to assume that the faults will significantly impede flow in the aquifer units.

Comment MuK 70

Mine Plan, Addendum MP-3 Groundwater Model, 70. Page Addendum MP-3-40 states, "As the current, post-CBM potentiometric surface is considered the static level……." Please provide the implications of this assumption, on the model calibration of hydraulic parameters and the mode predicted hydrologic impacts (over estimation of drawdown vs. underestimation) (MK)

Response MuK 70

Addendum MP-3 Sections 4.8.1, 4.10, and 4.11 all discuss the implications of CBM impacts. In addition, the response to comment MuK 53 also discusses CBM impacts to water levels. As discussed in the response to comment MuK 53, the model conservatively assumed that CBM operations have lowered the water levels in the eastern portion of the model domain to a level near the top of the coal seams. To simulate this drawdown, the elevations of each general head boundary on the east side of the model were set at an elevation just above the top of the coal seam. The general head boundaries elevations remained the same in both the steady state and the transient models. Essentially, this means that the model operated under the assumption that the post CBM impacts were permanent prior to and after the Brook Mine mining activities.

The assumption that the water levels have been permanently impacted by CBM did have a significant impact on model calibration. The severely depressed water levels

caused by CBM operations have resulted in a large number of cells going dry. The hydraulic parameters of the aquifer units within the eastern portion of the model domain were not adjusted to eliminate the dry cells since it is reasonable to assume that, with the severe drawdown modeled, the coal seams could have been dewatered in these areas. Therefore, even though the effects of the CBM drawdowns were observed during calibration, no specific adjustments were made to the modeled aquifer characteristics to eliminate these impacts. The dry cells did complicate calibration of the model because they cause instability in the MODFLOW model calculations and results.

The model was developed to take into account impacts from the combined effects of CBM and the proposed coal mining. In general, CBM development impacts are significantly larger than the predicted impacts from the Brook Mine. Therefore, ignoring CBM impacts would have significantly under predicted the potentiometric surfaces within the model domain and overestimated the impacts that Brook Mine would have on the system.

Many of the CBM wells are actively being plugged and abandoned. If this trend continues, there is a chance that recovery of water levels from CBM impacts may begin which will result in recharging of the coal seams. If this happens, it is anticipated that the model conservatively over predicts the impacts to the region especially in the long term recovery scenarios.

Comment MuK 71

Mine Plan, Addendum MP-3 Groundwater Model, 71. It is noted that Table 4.7-1 summarizes the calibration residuals and statistics from the calibrated model. Please consider providing additional presentations of the calibrated model statistics. This will enable an easier evaluation of any spatial bias in the model calibration. (MK)

a. X-Y plot of observed vs. simulated water levels.

b. A map plotting the residuals to show the spatial distribution

c. Provide a summary statistics table with Mean Error, Mean Absolute Error, Sum of Squared residuals for the calibrated model. It is noted that some of these values are presented in the sensitivity analysis. However, a compiled summary statistics table would be very helpful.

Response MuK 71

As requested the following additions have been made to the groundwater model report:

A. An X-Y plot of observed versus simulated water levels has been added in the report as Addendum MP-3 Figure 4.7-1.

B. The residuals have been added to figures 4.7-2, 4.7-3, and 4.7-4 of Addendum MP-3.

C. Table 4.7-1 of Addendum MP-3 has been updated to include additional statistics.

Comment MuK 72

Mine Plan, Addendum MP-3 Groundwater Model, 72. In addition, to the measured water levels, please clarify if there were any flow measurements used for model calibration. (MK)

Response MuK 72

There are no areas within the model domain where it was possible to collect any flow measurements that would support the modeling effort therefore, no flow measurement were used in the calibration.

Comment MuK 73

Mine Plan, Addendum MP-3 Groundwater Model, 73. Please provide a water budget table (in acre-feet per year or cubic-feet per day) showing all the inflows into the model and outflows from the model.

Response MuK 73

The following tables summarizes the inflows and outflows from the model domain during the steady state period, 5 years into mining, the end of mining, and at the end of recovery.

Mass Balance of Steady State Calibrated Model		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
General Heads	16,107	22,890
River	2,569	410
Drains	-	560
Recharge	5,168	-
Total	23,846	23,860

Mass Balance 5 years into Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	12,496	11,431
General Heads	16,130	22,904
River	2,688	385
Drains	-	1,774
Recharge	5,434	-
Total	36,749	36,494

Mass Balance End of Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	3,670	4,146
General Heads	16,135	22,902
River	2,705	365
Drains	-	532
Recharge	5,430	-
Total	27,941	27,945

Mass Balance End of Recovery		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	1,698	2183
General Heads	16,138	22,901
River	2,714	363
Drains	-	535
Recharge	5,427	-
Total	25,978	25,983

Comment MuK 74

Mine Plan, Addendum MP-3 Groundwater Model, 74. Please provide a comparison of model simulated inflows and outflows against conceptual estimates of inflows and outflows. This comparison will act as another verification/check for the technical adequacy of the groundwater model (Example model GHB flows vs. reasonable estimated conceptual flows). (MK)

Response MuK 74

Response to comment MuK 73 includes tables that show the inflows and outflows from the model during the steady state period, 5 years into mining, the end of mining, and at the end of recovery. The five main categories of inflows and outflows include 1) storage, 2) general head boundaries, 3) river boundaries, 4) drains, and 5) recharge. Following is discussion regarding model predicted inflows and outflows for each category:

1) Storage – During the steady state model there is no inflow or outflow from storage so storage is not included in the first mass balance table in prepare for comment MuK 73. The model predicts that during active mining more water will come out of storage than will go into storage. Conceptually this is reasonable since during mining, water from the coals would be draining into the mined out areas. There is a trend of water continuing to come out of storage even after mining ceases. Even though the volume of water coming out of storage is quite low, it is contrary to the conceptualization of the system to have water leaving storage after mining because at this point water should be going back into storage. This phenomenon is attributed to the fact that many of the

cells in the model go dry during mining because CBM operations have significantly dewatered the coals and there is not much water available in storage (see comment MuK 70). When the cells go dry, MODFLOW treats them as no flow areas and there can be a ripple effect that causes additional cells going dry. Since MODFLOW is not very efficient at rewetting dry cells when they should be resaturated, this ripple effect has caused permanent changes in the model. Over a long time the model would be expected to come to a steady state condition. The tables prepared in response to comment MuK 73 indicate that even at the end of recovery, the model is not yet at the new equilibrium that would eventually be reached with the additional dry cells.

2) General Head Boundaries – The amount of water going into and out of the model domain via the general head boundaries remains relatively consistent throughout the modeled operations. This is reasonable because the general head boundaries are a long distance from the mining area and would not be expected to be significantly impacted by mining. In addition, the total volume of outflows from the general head boundaries generally balances the inflows from other sources. This is conceptually correct.

3) River Boundaries – The conceptual inflow and outflow from the coals to the Tongue River are discussed in detail in comment MuK 56. Groundwater Vistas does apply the River Boundary cells to the bottom of the layer in which they are inserted. The Tongue River Boundary cells were inserted into the model up to the point where Goose Creek joins the Tongue River. At that location the top of the Carney coal is estimated to be approximately 100 feet below the surface. Since the alluvium is generally much thinner in this area and there is actually a large amount of low permeability strata between the Tongue River alluvium and the coal (described in comment MuK 56), the model likely overestimates the contribution of the River boundary cells to the model because the river boundary cells provide a direct connection (in the model) between the river and the coals where there is not a physical connection. This conservatively over estimates how much water discharges from the River Boundary Cells to the model.

4) Drains – One drain was placed into layer 1 in the northeast side of the model domain to allow water to drain from the model where the Tongue River crosses the domain boundary. This represents the amount of water in layer 1 lost to the surface water system. The total discharge from this drain during steady state conditions is 560 ft^3/day (2.9 gpm). While no physical measurements were (or can be) made to verify this amount, conceptually it is reasonable. The strata along the Tongue River likely does discharge a small amount of water to the River where it cuts through the numerous perched sand lenses that become saturated from natural recharge. There is no evidence of large groundwater discharges to the Tongue River in this area so it makes sense that a small

discharge to the River (rather than a large discharge) would be observed in the model. During mining, drains were added to the model to remove water from the mine pits. The tables indicate that during mining the discharges from the drains do increase as expected. After mining is complete, discharges from the drains return approximately to premining levels which is conceptually correct.

5) The recharge amount used in the model stays at relatively the same level throughout the simulations. Total recharge across the model area is approximately 28 gpm. As is described in comment #65 the recharge rates are reasonable based on available studies.

Comment MuK 75

Mine Plan, Addendum MP-3 Groundwater Model, 75. Page Addendum MP-3-40 states, "Due to a system of thin aquifers with similar sources and sinks and homogeneous hydraulic conductivities, the head values of the steady-state model were nearly identical between the separate coal layers as noted in Table 4.7-1." Please clarify whether this statement implies that the interburden (where present) between the coal seams is not a confining unit. (MK)

Response MuK 75

This statement is an observation only based on review of modeled values and does not suggest a lack of confinement exists. Pumping tests conducted in separate aquifers demonstrated that the interburden provides confinement between the Carney and Masters aquifers as described in Section D6-8.3.2.3 of Appendix D6. In addition, Table 4.7-1 of Addendum MP-3 shows that at each cluster where both coal seams contained measureable water, the difference in measured water levels between the coal seams was higher than the modeled difference. This suggests that the vertical hydraulic conductivity assigned to the interburden in the model may be higher than the actual hydraulic conductivity of the interburden in the field. The use of a higher hydraulic conductivity for the interburden in the model will overestimate the drawdown in the other coal seam therefore, the predicted drawdown will be conservative.

Comment MuK 76

Mine Plan, Addendum MP-3 Groundwater Model, 76. In figures 4.7-1, 4.7-2 and 4.7-3, please consider including the observed/interpreted water level contours and the measured water level elevations. This will enable to visually evaluate the observed vs. simulated water levels. (MK)

Response MuK 76

Figures 4.7-1, 4.7-2, and 4.7-3 of Addendum MP-3 have been updated to include both observation wells and observed elevations as well as observed potentiometric contours.

Please note that in response to Comment MuK 71 an additional figure was added to this section (Figure 4.7-1) and these figures have since been renumbered to 4.7-2, 4.7-3, and 4.7-4.

Comment MuK 77

Mine Plan, Addendum MP-3 Groundwater Model, 77. Page Addendum MP-3-45 states, "…….and if CBM production ceases, recovery rates will likely be higher than estimated in the model." Please clarify if this statement implies that currently, there are CBM wells that are operational in the area and are pumping out groundwater. (MK)

Response MuK 77

Although substantially less than past years, some CBM wells in the area are still producing groundwater. Since CBM production has been ongoing for the last 15+ years the CBM operations have significantly lowered the water levels in the coals as is noted in the report. Records of groundwater withdrawals can be found on the Wyoming Oil and Gas Conservation Commission's (WOGCC) online database at: wogcc.state.wy.us. According to WOGCC records there has been no groundwater production associated with CBM in Townships 57 and 58N Range 84W since 2012. However production is still occurring in Townships 57 and 58N Range 83W as well as Township 56N Range 83 and 84W. The portions of the model domain where CBM production may occur are located in Townships 56 and 57N Range 84W.

Comment MuK 78

Mine Plan, Addendum MP-3 Groundwater Model, 78. Please consider removing the model sensitivity to storage coefficients and porosity. Steady state groundwater model equations do not include these parameters in any of the model calculations. (MK)

Response MuK 78

As noted in this comment, the final model did not include a transient calibration and a sensitivity analysis on storage coefficient and porosity is not appropriate. The section and discussion regarding model sensitivity to the storage coefficient and porosity has been updated and removed as appropriate.

Comment MuK 79

Mine Plan, Addendum MP-3 Groundwater Model, 79. Please clarify if the faults in the model and their parameters were considered in any of the sensitivity analyses. If not, please consider performing a detailed and thorough sensitivity analysis, as the faults appear to influence the drawdowns simulated by the groundwater model. (MK)

Response MuK 79

The faults do influence the drawdowns and flow patterns simulated in the groundwater model. However, as noted in the response to comment MuK 51 the displacement observed in the faults roughly 5 times as thick as the modeled coal seams. Given the fact that the dominant lithology in the area is low permeability claystone/siltstone, it is very likely that where faulting has occurred the displacement has resulted in coals being immediately adjacent to the low permeability strata. Therefore the faults are assumed to be hydrologic barriers to water flow. Based on the best available mapping, these faults have been placed into the model. Because the faults are physical parameters that were developed along with development of the geological model (i.e. elevations and thicknesses of the geological layers), a sensitivity analysis was not performed on the faults.

Part of the reason that the faults influence the groundwater responses in the groundwater model to the degree that they do is because of the CBM impacts. Because the CBM operations have significantly lowered the water levels in the coal seams, the faults create a shadow effect that results in many of the cells immediately downstream of the faults going dry. If there had not been any CBM dewatering operations performed in the coals, the water levels would be significantly higher and the effects of the faults would not be as pronounced.

Comment MuK 80

Mine Plan, Addendum MP-3 Groundwater Model, 80. In addition to the simulated drawdown maps, please consider providing hydrographs at strategically selected locations. This will enable a better presentation of the impacts over time. (MK)

Response MuK 80

As suggested, Appendix A has been added to Addendum MP-3 which depicts the modeled water elevations during the model simulation period at all the water supply wells identified within the model domain (CBM wells excepted) and at selected alluvial target locations within the model domain.

Comment MuK 81

Mine Plan, Addendum MP-3 Groundwater Model, 81. Please clarify if the three wells listed in Table 4.9-1 are the only wells considered for the analysis. Also, provide a discussion on the methodology to narrow down the analysis from several wells shown in the groundwater rights maps to these three wells. (MK)

Response MuK 81

Additional wells beyond those originally presented in Table 4.9-1 were considered in the analysis. Table 4.9-1 has been updated to include all the wells considered in the analysis. To determine which wells were included in the analysis, completions were

compared to modeled surfaces to estimate which formation in which the well was completed. Those thought to be completed in the Carney/Masters sequence were included. Please note that the wells included in Table 4.9-1 error on the side of being over inclusive. Some of the wells are believed to be completed in multiple zones but the analysis assumes that they are only completed in the coal seams of interest. In addition, the well depths were determined based on the State Engineer's database and in many cases well depth data was left blank or was questionable. If there was a question whether a well was actually completed in the coal aquifer of interest the well was assumed to be completed in the coal. Therefore, the well list may include some wells that are not completed in the coals of concern.

Comment MuK 82

Mine Plan, Addendum MP-3 Groundwater Model, 82. Please provide (or reference) a discussion about the three wells listed in Table 4.9-1, their depths, screened intervals and other pertinent information. (MK).

Response MuK 82

Table 4.9-1 has been updated to include total depth as well as the screen intervals for all the wells. Additional details on the wells can be found in Adjudication Appendix B.

Comment MuK 83

Mine Plan, Addendum MP-3 Groundwater Model, 83. Page Addendum MP-3-60 states, " To measure the impacts to the Tongue River and Goose Creek, a series of targets were placed along these drainages in Layer 1" Please define the term target. Also, clarify if these targets are located in the alluvial aquifer. (MK)

Response MuK 83

The targets as used in Groundwater Vistas are simply locations where heads are measured and compared with measured heads (if there are any available). Ground Water Vistas generates a hydrograph throughout the transient period of mining and recovery for each target. These targets were placed in Layer 1 to estimate the impacts of mining to surface water bodies. These targets are located where the alluvial aquifer is simulated in Layer 1. Targets representing existing well locations were also put in layers 4 and 6 as well as discussed in Comment MuK 81.

Comment MuK 84

Mine Plan, Addendum MP-3 Groundwater Model, 84. Page Addendum MP-3-60 states, "These targets demonstrate that the estimated maximum impact to Tongue River Alluvium is conservatively estimated to reach 2.5 feet drawdown near the river." Please expand the discussion on the impacts to surface water flows including translating the

drawdown to an estimated decrease in the groundwater baseflows to Tongue River and Goose Creek. (MK)

Response MuK 84

As shown on the hydrographs included in Appendix A, the maximum water level decline of 2.5 feet to the Tongue River alluvium occurred permanently and was caused by dry cells. This 2.5 foot drawdown is not believed to be a real drawdown because it resulted from model instability rather than a real predicted result. If the model did not have dry cells that caused permanent changes in the model, the maximum drawdown due to mining is estimated to be less than 0.5 feet.

As noted in the response to comment MuK 56, the model estimates the coals will contribute a relatively insignificant amount to water to the base flow of the Tongue River. As noted in Comment MuK 73 in the steady state model the River contributed approximately 2,569 cubic feet per day to the model while the river received 410 cubic feet per from the model. The net result is that in the steady state model 2,159 cubic feet per day (11.2 gpm) was contributed from the river to the model. For comparison, at the end of mining, the River contributed 2,714 cubic feet per day to the model and received 363 cubic feet per day from the model. The net result at the end of mining was that 2,351 cubic feet per day (12.2 gpm) was contributed from the River to the model. Over the simulated mining period the model estimates that the increased contribution of flow from the River to the model will be 1 gpm which represents approximately a 9% increase in flow.

Please note that in Groundwater Vistas the river boundary cells go to the bottom of the layer which likely overestimates the impacts to the River. Within the eastern portion of the model domain the coal aquifers can be 200 or more feet below the level of the river while the Tongue River Alluvium is estimated to be between 15 and 30 feet thick based on the thickness of alluvial wells constructed by Big Horn Coal in the area. Therefore, within the eastern portion of the model domain, the coals may be significantly below the alluvium and no River boundary was included in this portion of the model. However, there is an intermediary region where the actual level of the River is some 30-70 feet higher than the coals. At these locations the River boundary cells were left on to conservatively show the impacts to the river. However, the alluvium in these areas is likely thinner than 40-70 feet. As a result, the model allows the River to directly contribute water to the coals below and the model is expected to overestimate the impacts to the Tongue River in these locations.

Comment MuK 85

Mine Plan, Addendum MP-3 Groundwater Model, 85. Please provide a statement on any hydrologic impacts predicted by the groundwater model to areas outside the Brook mine permit boundary. (MK)

Response MuK 85

The only impacts outside of the Brook Mine Permit Boundary would be observed at the existing water supply wells. Table 4.9-1 describes the estimated impacts at all the water supply wells in the Model domain that will be impacted both inside and outside of the Brook Mine Permit Boundary. Please note that most of these wells are located outside of the Brook Mine permit boundary. As shown on Table 4.9-1 the largest model predicted impact seen at any existing well outside of the Brook Mine Permit boundary is 20 feet which would be observed at P48251W. As shown in the hydrograph for this well in Addendum MP-3 Appendix A, this impact is estimated to be short lived (approximately 4 years). Model predicted drawdowns at the rest of the wells are less than 5 feet. At many of the wells predicted drawdowns are less than 1 foot over the life of the mine.

Comment MuK 86

Mine Plan, Addendum MP-3 Groundwater Model, 86. Please provide a discussion on the simulated impacts caused by mining to surface water – groundwater interaction within the model domain. (MK)

Response MuK 86

Please see the response to comment MuK 84.

Comment MuK 87

Mine Plan, Addendum MP-3 Groundwater Model, 87. Please compare the model simulated water balance between pre-mining, during mining and post mining conditions. Consider including a table that presents the water balance during select periods showing the flows from all sources and discharges to all the sinks within the model domain. Provide a detailed discussion addressing any changes in the model simulated water balance between pre-mining, during mining and post mining conditions. (MK)

Response MuK 87

Please see responses to comments MuK 73 and MuK 74. A detailed discussion is included in the responses to these comments.

Comment MuK 88

Mine Plan, Addendum MP-3 Groundwater Model, 88. In addition to the maps presented on the recovery estimates, please provide hydrographs at strategically selected locations. This will enable a better presentation of recovery over time. (MK)

Response MuK 88

As described in response to Comment MuK 80, an appendix (Appendix A) has been added to Addendum MP-3 which depicts the modeled water elevations at a number of well and target locations within the model domain.

Comment MuK 89

Mine Plan, Addendum MP-3 Groundwater Model, 89. The modeling documentation lacks discussion on the backfill aquifer. In the recovery model, please clarify how the model treats the backfill aquifer (spoils aquifer) and its resaturation. Please provide a discussion (or reference) to the hydraulic properties of the backfill materials used to create the backfill aquifer and the aerial extent of the backfill aquifer. (MK)

Response MuK 89

Mine Plan Section 4.10 discusses the backfill aquifer. Within the areas where the highwall miner is used for mining, an open cavern will be left behind. Unless the mined out areas collapse, the backfill aquifer is essentially an open cavern with 100% porosity. The modeling software used for this effort does not have the ability to transiently change aquifer properties, and during resaturation of the mined areas the assigned storage coefficients remained the same as the original aquifer properties. As a result, the model may underestimate the time that it takes for the aquifer to resaturate where the mining methods have increased the porosity and thereby resaturation volume. Inversely, in the slots mined with traditional open cut mining techniques, coal will be removed and replaced with overburden material. In these locations the backfilled material is expected to have poor aquifer characteristics because it will primarily be a mix of fine grained clay and silt with some sand. In these areas the aquifer will essentially be removed. Again, the modeling software does not have the ability to transiently change aquifer properties and this effect was ignored during the modeling.

Figure MP-3-4.9-1 shows the areal extent of mining and Addendum MP-3 Figures 4.7-2, 4.7-3, and 4.7-4 depict the areas that were modeled as dry within the Brook Mine permit area. It is important to note that a large percentage of the area that will be mined is dry prior to the initiation of mining. In addition, figures in MP-3 Section 4 show that after mining, some of the areas go dry and do not rewet. In the areas where slots are excavated this prediction is reasonable because the backfill will act as an aquitard with poor aquifer characteristics. A layer by layer review of the mined area at the end of mining was conducted to determine conceptually how ignoring the changes in the coal porosity and changes in backfill material may have impacted the model predictions.

Upper Carney-With exception of a very small portion of mine block 9 (Figure MP-3-4.9-1). The entire Upper Carney coal is unsaturated. Therefore, there is no resaturation and no recovery. The model estimates are appropriate for the Upper Carney coal.

Lower Carney - Most of the mine blocks as well as the open slots are dry in the Lower Carney at the end of mining. Only mine blocks 1, 2, 5, 9, and 10 had substantial portions that were saturated. As a result, the potential error created by transient aquifer properties in model predicted resaturation rates to the underground mined coal blocks in the Lower Carney coal, if any, is expected to be very low. With the exception of the slots cut to mine blocks 5, 9, and 10, all of the slots cut to mine the Carney Coal will also be dry; therefore, resaturation at those locations will not substantially impact model predictions. The slots cut for blocks 9 and 10 generally run parallel to the direction of water flow. If the coal in these locations is completely removed and replaced with an aquitard, the impact to the aquifer will be minimal because water will simply flow around the portion of the backfilled aquifer. The open pit slot cut adjacent to mine block 5 does run perpendicular to the direction that water is flowing and may change the groundwater flow patterns in this area. However, the location of the slot is near the groundwater divide caused by the fault just to the south. Therefore, this slot is not expected to substantially impact groundwater flows either

Masters - Most of the Masters Coal mine blocks are saturated. Only blocks, 4, 5, 6, and 7 have substantial areas that are not saturated. In the mine blocks where underground mining techniques are employed the model may underestimate the time it takes for resaturation to occur because the storage coefficient is not updated to account for the increased porosity of the mined out block. However this resaturation time will be balanced out by the fact that there will be no aquifer replaced in the open cuts to resaturate, and thus these areas would not resaturate as the model predicts. With the exception of the open cut for mine block 5, all of the open cuts are oriented so that they will have minimal impacts on the natural flow gradients in the wellfield or are located within or adjacent to dry areas. As previously noted, the open cut near mine block 5 is located adjacent the drainage divide so it will not significantly change the water flow within the aquifer.

Due to the fact that much of the mined area is dry, the actual area mined that is below the water table is relatively small, and that the open cuts are oriented such that they have minimal impacts to groundwater flow, the recovery analysis performed by the model is reasonable. Also, as noted, the areas where underground mining is employed and the model overestimates the rate at which the aquifer is resaturated are counterbalanced by the areas of open cuts where the aquifer will not be replaced and the model underestimates the time it takes for the strata to resaturate.

Comment MuK 90

Mine Plan, Addendum MP-6 Subsidence Control Plan, 90. Figure MP6.1-1 shows "Monarch Seam Surface Only Mining". Please clarify if the Monarch seam is targeted for mining in the appropriate sections of Appendix D5, Appendix D6 and mine plan. (MK)

Response MuK 90

The appropriate sections of Appendix D5 and D6 have been updated.

Reclamation Plan

Comment BJ 57

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-37, The narrative describes the sources of recharge to the coal seams. One lithology mentioned as a positive recharge contributor is the overlying burn, scoria, or clinker material, generated by coal fires. It is a common misunderstanding that the scoriaceous material recharges coal or overburden. It would appear, at first glance, that the broken, vuggy material would be capable of conveying large amounts of water from the surface to materials beneath. That is not the case, however, as the coal/scoria interface has a zone of partially metamorphosed coal ash that lies between the burned material and the remnant coal. I have seen this zone many times during my 25 year career in the coal mines when supervising coal and overburden removal. This zone is characterized by a white to light gray, clay band that ranges in thickness from 6 inches to a foot or more. It is the same high silica ash found in the bottom ash of the local power plants that burn PRB coal. This ash band acts as an aquaclude, preventing water from entering or escaping the coal. Because of this, any recharge models that were run using the scoria as a recharge source must be reevaluated using new layers that do not include the scoria. Rerun recharge models if needed.

Response BJ 57

It is true that the partially metamorphosed coal ash layer between the coal and the scoria has the potential to limit recharge from the scoria to the coal. However, even though the permeability of this layer is low, there will be areas where the coal has collapsed or other geologic variances such as a thinning section which will allow for water from the scoria to come into contact with the coal. Therefore, even though the scoria may not be directly in contact with the coal, there is still a recharge component to the scoria, albeit; significantly lower than if the scoria and coal were in direct contact. This low recharge rate is reflected in the groundwater model. The calibrated recharge rate used in the groundwater model for the areas covered by scoria was 0.35 inches per year. For comparison purposes, the recharge rates assigned to the Carney and Masters outcrops, where no scoria was present, varied from 0.2 to 0.88 inches per year. Considering that in the scoria areas a very large percentage of direct precipitation is expected to infiltrate into the scoria, the 0.35 inch per year recharge rate represents a significant reduction in the amount of water available (which could be upwards of 10 inches per year) to infiltrate into the coal seams. Therefore, the calibrated recharge rate included in the groundwater model does take into account the low permeability layer between the coal and the scoria.

Comment BJ 58

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-39, The second sentence in the first paragraph has an odd, difficult to understand syntax. Please rewrite the sentence for clarity.

Response BJ 58

Revised page RP-39 text as requested. The sentence will now read "The mine will consult with WDEQ/LQD to determine the number of spoil wells that will be tested".

Comment BJ 65

EXHIBITS, Reclamation Plan, Exhibit RP.6-1, The permit boundary on this map is inaccurate. Please recreate the permit boundary layer.

Response BJ 65

Revised Exhibit RP. 6-1 as requested.

Comment BJ 66

EXHIBITS, Reclamation Plan, Exhibit RP.8-3 and Exhibit RP.8-4, The post mining potentiometric surfaces for the Carney and Masters beds are suspended in mid-air over Slater Creek. Please terminate the contour lines at the outcrop or use a dotted line to indicate the calculated potentiometric surface.

Response BJ 66

Revised Exhibit RP.8-3 and RP.8-4 as requested.

Comment DS 24

Reclamation Plan, Section RP.4. This brief section discusses what is considered spoil material to be removed during mining. The section states that spoil does not include coal, but there are some very narrow coal seams with numerous stringers of clay or of such low quality that will probably not be mined and will be placed in backfill. Also, the top layers of most coal seams are quite "dirty" and would also be removed and backfilled. In order to provide the readers with a more accurate description of the mining and reclamation processes, please revise the text to show that some coal-laden materials will also be considered spoils and will be backfilled during reclamation.

Response DS 24

Revised text as requested.

Comment DS 25

Reclamation Plan, Section RP.5.2. Please provide a description of the methods used to control topsoil depth during replacement. Most mining operations use stakes with surveyed marks as guides for controlling soil application depths.

Response DS 25

See Section RP.5.4 for a description of the methods used to control topsoil depth during replacement.

Comment DS 26

Reclamation Plan, Section RP.5.4. Variability in topsoil depth cannot be avoided due to limitations imposed by the equipment used and the pre-application preparations which may include ripping of the compacted overburden surface. Typically, the depth of topsoil application may vary 25%, but the average depth should be closely monitored and should not exceed the average availability. Also, because some soils exhibit unsuitable characteristics and will not be used for reclamation, discussion of the use of substitute topsoil materials is warranted in this section.

Response DS 26

Revised text as requested. Added discussion about substitute topsoil being an option if not enough suitable topsoil is salvaged.

Comment DS 27

Reclamation Plan, Section RP.5.6. Sediment control measures will be required to prevent untreated runoff from exiting reclaimed lands onto adjacent native lands. Please provide a discussion of the sediment control measures to be used.

Response DS 27

Revised text as requested.

Comment DS 28

Reclamation Plan, Section RP.8.2. This section states only that impoundments will require Landowner, LQD and SEO approval. Prior to construction of post mining impoundments, SEO approved plans for the impoundments must be submitted for inclusion in the permit Reclamation Plan. Please include a statement that a Reclamation Plan revision will be approved by the LQD prior to construction of impoundments.

Response DS 28

Revised Section RP.8.2 to include a statement regarding LQD approval before the construction of postmine impoundments.

Comment DS 29

Reclamation Plan, Section RP.11.1. The primary final land use for the permitted acreage will be grazing and wildlife. Only areas where the current use is industrial will remain industrial land uses after mining is completed. Therefore, in order for any constructed buildings or railroad access to remain following mining, and a permit revision to change the land use will be required. It is not just a matter of demonstrating usefulness to the LQD and receiving landowner consent. This will be a major revision to the permit that will require public notice. Clarification should be provided concerning the steps involved to allow building to remain.

Response DS 29

Revised text as requested. Eliminated discussion in Section RP.11 regarding leaving any buildings, facilities, and equipment following completion of mining.

Comment DS 30

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30

See Mine Plan MP.1.6 for a description of permit terms and initial year. Revised text in Reclamation Plan Section RP.13 to reference Mine Plane MP.1.6. Revised Exhibit RP.5-1 adding "Note: Year 3 corresponds to the year 2019" in Legend.

Comment DE 19

Reclamation Plan, Section RP.5.1, page RP-6 – RAMACO states that the contoured surface will be scarified or ripped, if necessary. The mine should commit to scarifying or ripping all surfaces prior to topsoil replacement.

Response DE 19

Revised text as requested. Remove "if necessary" from sentence.

Comment DE 20

Reclamation Plan, Section RP.5.6, page RP-8 - The 1st sentence of the 2nd paragraph doesn't make sense. Please correct.

Response DE 20

Revised text as requested. The sentence now reads "Rills and gullies occurring in redistributed soil precluding the achievement of the approved postmining land use or the reestablishment of vegetative cover will be rectified".

Comment JJ 5

Reclamation Plan, 5. Exhibit RP 6-1 also displays permit boundary discrepancies in regards to the section lines on it and those located on the Adjudication Exhibit 1. Please update accordingly.

Response JJ 5

See response to comment BJ 65. Revised Exhibit RP.6-1 as requested.

Comment JJ 6

Reclamation Plan, 6. Table RP 6-1 states that there are 11.6 acres of wetlands and other aquatic resources. Please discuss where these acres are to be reclaimed and show them on the Exhibit RP. 6-1 which displays the reclaimed vegetation communities and their locations.

Response JJ 6

Revised Section RP.9 to include reference to Exhibit RP.6-1 for location of reclaimed wetlands and OAR. Revised Exhibit RP.6-1 to include reclaimed wetlands and OAR locations.

Comment MK 24

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, Assuming the Tongue River is an AVF, this section should discuss how the essential hydrologic functions will be maintained and/or reestablished, as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(ii). As noted in Comment No. 21, the essential hydrologic functions of the Tongue River AVF need to be identified and a monitoring system needs to be installed. (MDK)

Response MK 24

Revised text as requested in Section RP.10.

Comment MK 25

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 25. As noted in Comment No. 21, the adjacent Goose Creek AVF also needs a monitoring system to demonstrate essential

hydrologic functions are maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 25

Revised text as requested in Section RP.10.

Comment MK 26

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 26. This section may also need to be addressed if the LQD finds that other AVFs exist on or near the permit area. If AVFs are determined to be present, the essential hydrologic functions must be maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 26

Revised text as requested in Section RP.10.

Comment MK 75

Reclamation Plan, Section RP.3.3 Postmine Slope Analysis, 49. Please provide a discussion that compares the pre-mine vs. post-mine slope characteristics. A table would be helpful that compared the minimum, maximum, and average slopes under pre-mine and post-mine conditions. (MDK)

Response MK 75

Added Table RP.3-1 comparing premining and postmining slopes. Updated Section RP.3.3 of text to include reference to the new table.

Comment MK 76

Reclamation Plan, Section RP.3.5 Drainage Reestablishment, 50. It is stated that mining will disturb portions of the Slater Creek channel and the reclamation will entail reconstruction. However, the Mine Plan PHC (Section MP.6.1) stated that Slater Creek "will still flow naturally around the trench", and "Because Slater Creek's flow will not come into contact with mining activities, no impact will be made to water quality". Please provide a clear and explicit description of the extent of direct disturbance to the Slater Creek channel. This description should be consistent between the Mine Plan and Reclamation Plan. (MDK)

Response MK 76

As stated in the revised Section MP.6.1 of the Mine Plan, the only anticipated surface disturbance to Slater Creek during mining will be the redirection of the channel

through a culvert under a proposed haul road. No text was edited in response to this comment.

Comment MK 77

Reclamation Plan, Section RP.4.2 Mitigation of Unsuitable Material , 51. Minor channels are defined as ephemeral streams but there is no definition provided for "major channels". Please provide a definition and also illustrate an example of a major channel within the proposed permit boundary that would fit into this category. (MDK)

Response MK 77

Revised text in Section RP.4.2 to provide the definition of major channels.

Comment MK 78

Reclamation Plan, Section RP.5.6 Erosion Control and Conservation Practices, 52. The first sentence of the second paragraph…"Rills and gullies…" needs revised, as it appears to be missing one or more words. (MDK)

Response MK 78

See response to Comment DE 20. Text revised as requested.

Comment MK 79

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 53. The second sentence discusses stockponds possibly being disturbed by mining activities. The Mine Plan PHC did not mention that any existing stockponds would be disturbed by mining activities. If stockponds are to be disturbed by the mining operation, this should be discussed in the Mine Plan PHC. (MDK)

Response MK 79

The text in the Mine Plan PHC has been revised to clarify the disturbance to stockponds within the permit area. Section RP.7.4 has been revised to clarify the anticipated aquatic habitat locations.

Comment MK 80

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 54. The text states that two additional postmine impoundments will be constructed and their location is shown in Exhibit RP.3-1. This Exhibit shows ten permanent impoundments, both on and adjacent to the proposed permit area. Please revise this discrepancy in the text or change the symbology in the Exhibit to clearly show the two permanent post-mine impoundments. (MDK)

Response MK 80

Revised text in Section RP.7.4. to clarify the postmine impoundment locations.

Comment MK 81

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 55. Please add the major stream name labels (Tongue River, Goose Creek, East Fork Earley Creek, Slater Creek, Hidden Water Creek) to Exhibit RP.8-1. (MDK)

Response MK 81

Revised Exhibit RP.8-1 as requested.

Comment MK 82

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 56. Please explain in the text how the postmine drainage basin parameters in Table RP.8-1 were determined. (MDK)

Response MK 82

Revised text in Section RP.8.1 as requested.

Comment MK 83

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 57. The text states that a comparison of drainage basin parameters in Table RP.8-1 and Exhibit RP.8-1 show that the overall hydrologic balance will remain largely unchanged. This conclusion is not obvious from the Table and Exhibit. How similar are the postmine drainage basin parameters to the pre-mine parameters? Which sub-drainages show the largest change from pre-mine conditions? The text needs to include a more thorough discussion to demonstrate to the reader why exactly the postmine hydrologic balance will be unchanged. (MDK)

Response MK 83

Revised text to include reference to Appendix D6 tables and exhibits regarding drainage basin parameters. Minor disturbance and mining methods contribute to the largely unchanged postmine drainage basin parameters.

Comment MK 84

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 58. The text provides no discussion of the comparison between the pre-mine and postmine modelled discharge values. Please provide this discussion so the reader can determine if the differences are minor or major. (MDK)

Response MK 84

Revised text in Section RP.8.1.1 as requested

Comment MK 85

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 59. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section RP.17. (MDK)

Response MK 85

Revised text as requested.

Comment MK 86

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 60. Similar to Comment No. 8 made for Appendix D6, the HEC-HMS runoff estimates in Table RP.8.4 are much higher than the Miller (2003) equations. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) regression equations.

Response MK 86

See response to Comment MK 34. No revisions to the text were made.

Comment MK 87

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, The last sentence in the first paragraph states that stream reaches for which designed cross sections are provided are identified in plan on Exhibit RP.8-1. There is nothing on this Exhibit that shows which stream reaches have designed cross sections, nor which stream channels are being reconstructed. Please clearly identify this information on this Exhibit. (MDK)

Response MK 87

Exhibit RP.8-1 has been revised as requested.

Comment MK 88

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 62. Exhibit RP.8-2 shows that the main Slater Creek channel will not be disturbed. Please consider this in light of Comment No. 50 that requested clarification on the extent of disturbance to the Slater Creek channel. (MDK)

Response MK 88

See response to Comment MK 76(referred to as Comment No. 50). Revised Exhibits RP.8-1 RP.8-2 as requested. A reconstructed Slater Creek (Figure RP.8-9) cross section has been added to reflect the correct disturbance boundary.

Comment MK 89

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 63. On Page RP-35, second paragraph, it references "reclaimed Slater Creek channel" and channel hydraulics are presented in Table RP.8-5. It is not clear why channel hydraulics are presented for Slater Creek when it will not be disturbed. Is this because reclaimed tributaries to Slater Creek are changing such that the main channel of Slater Creek is expected to be change? Please clarify this in the text. (MDK)

Response MK 89

Slater Creek is included Table RP.8-5 to show that the postmine Slater Creek Channel will be hydraulically similar to premine conditions after mining and reclamation operations have been completed as reclamation of a portion of Slater Creek is expected.

Comment MK 90

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 64. It is unclear exactly how many new postmine impoundments will be constructed. Table RP.8-6 identifies two impoundments (Enhancement Stock Pond 1 and Replacement Stock Pond 1), and these are shown in Exhibit RP.3-1. Exhibit RP.3-1 shows eight other permanent impoundments. Please identify if these are new features to be constructed or if they are existing stockponds that may be affected by the mining operation. (MDK)

Response MK 90

The text in Section RP.8.2 has been revised to clarify that only the new features to be constructed are displayed in Table RP.8-6. Affected existing stockponds will be constructed approximately to premine conditions.

Comment MK 91

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 65. Please identify in this section if there will be a net increase or decrease in post-mine water storage capacity relative to pre-mine capacity. (MDK)

Response MK 91

Revised text in Section RP.8.2 to clarify a net increase in water storage capacity is expected due to the addition of two postmine impoundments.

Comment MK 92

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 66. As mentioned Comment No. 47, it is advised that the applicant discuss with the SEO-Interstate Streams Division any implications for the Yellowstone Compact if new water storage features are proposed that potentially decrease water quantity to the Tongue River. (MDK)

Response MK 92

See response to Comment DS 28(Comment No. 47 mentioned above). Revised text as requested.

Comment MK 93

Reclamation Plan, Section RP.8.4.2 Surface Water Monitoring, 67. The text on Page RP-40 states that the surface water monitoring stations are shown on Exhibit RP.8-4. However, the stations are not shown on this Exhibit. It may be make the most sense to add these to Exhibit RP.8-5 and rename the Exhibit "Postmine Hydrologic Monitoring Locations" so the surface water stations and monitoring wells are on one Exhibit. (MDK)

Response MK 93

Revised the reference in text to state "locations of these sites are shown on Exhibit RP.8-5". Exhibit RP.8-5 was revised to include surface water monitoring stations and renamed as requested. Table RP.8-9 was edited to include all planned surface water stations including postmine impoundment monitoring sites.

Comment MK 94

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 68. The text on Page RP-41 states that water quality samples will be collected at each of the postmine impoundments listed in Table RP.8-6 and presented on Exhibit RP.3-1. Please clarify in the text that this sampling list includes all ten impoundments shown. (MDK)

Response MK 94

Revised text in Section RP.8.4.3 to reference Table RP.8-9 and Exhibit RP.8-5 for postmine surface water monitoring sites including postmine impoundments.

Comment MK 95

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 69. Please add the list of impoundments to be sampled to Table RP.8-9 "Surface Water Monitoring Sites". (MDK)

Response MK 95

Revised Table RP.8-9 as requested.

Comment MK 96

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 70. The postmine impoundments to be sampled appears to be slightly different from the impoundments listed in Mine Plan Table MP.7-1 "Operational Surface Water Monitoring Locations". Table MP.7-1 lists three impoundments (Hall Reservoir, Black Mountain No. 1 Stock Reservoir, and Legerski Bros #1 Stock Reservoir) that are not listed as postmine impoundments to be sampled. Please explain why there is a difference in the operational monitoring and postmine monitoring of some impoundments. (MDK)

Response MK 96

Black Mountain No.1 Stock Reservoir has been added as a postmine impoundment that will be monitored. Legerski No. 1 Stock Reservoir and Hall Reservoir are outside of the areas planned for mining disturbance, however in an effort to further monitor the surface water of the Brook Mine permit area, the reservoirs were added to be sampled quarterly during mining. Table RP.8-9 and Exhibit RP.8-5 have been updated to include Black Mountain Reservoir No. 1 Stock Reservoir.

Comment MK 97

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 71. In the second full paragraph on Page RP-41, "The water quality samples.." please also state that the water quality samples will be compared against WDEQ/WQD Class III groundwater standards, as suggested by LQD Guideline No. 17 for replacement and enhancement stockponds. (MDK)

Response MK 97

Revised text as requested in Section RP.8.4.3.

Comment MK 98

Reclamation Plan, Section RP.8.5.2 Surface Water, 72. At the end of the first paragraph on Page RP-44, it predicts a "slight change" in event peaks and volumes. Please further discuss what is meant by a "slight change", i.e., what is the magnitude of the increase or decrease? (MDK)

Response MK 98

Section RP.8.5.2 has been updated to reflect the change in event peaks and volumes will be less than one percent when compared to premining conditions.

Comment MK 99

Reclamation Plan, Section RP.8.5.2 Surface Water, 73. In the second paragraph on Page RP-44, please clarify the extent of direct mining disturbance to Slater Creek versus tributaries of Slater Creek. This comment relates to previous Comments No. 50 and 62. (MDK)

Response MK 99

See response to Comments MK 76 (comment No. 50) and Mk 88 (Comment No. 62).

Comment MK 100

Reclamation Plan, Section RP.8.5.2 Surface Water, 74. Please provide a discussion as to whether the planned postmine impoundments will affect surface water quantity on or downstream of the proposed permit area. (MDK)

Response MK 100

Section RP.8.5.2 has been revised to include discussion of the effect of postmine impoundments to the surface water quantity on and downstream of the proposed permit area.

Comment MK 101

Reclamation Plan, Section RP.9.1 Introduction, 75. The second paragraph references Appendix D8. Should this be Appendix D10 (Wetlands)? Please revise this if necessary. (MDK)

Response MK 101

The reference has been revised to D10 as requested.

Comment MK 102

Reclamation Plan, Section RP.9.1 Introduction, 76. Please add a statement up front in the Wetland Mitigation section that the USACE has not yet issued a jurisdictional determination for the proposed Brook Mine. Please also provide a statement in the text that the information in Section RP.9 may be subject to change pending the USACE determination. The USACE jurisdictional determination should also be incorporated somewhere into the Mine Permit once that is received by the Brook Mine. (MDK)

Response MK 102

Sections RP.9.1 has been revised as requested.

Comment MK 103

Reclamation Plan, Section RP.14 Bond Release, 77. The LQD no longer requires a bond release verification for "sediment control release". This is now termed "surficial stability verification". More information is available in LQD Guideline No. 23. Please revise the text for this change. (MDK)

Response MK 103

The text in Section RP.14 has been revised by removing the reference to sediment control release.

Comment MuK 91

Reclamation Plan, RP 8.5.3 Groundwater, 91. Section 8.3, page RP-38 states, "The estimated Postmine Potentiometric surfaces for the reclaimed aquifer for the Masters and Carney Seams are presented respectively in Exhibit RP.8.3 and Exhibit RP.8-4. Please provide a summary comparing and contrasting the premine potentiometric surfaces vs. post mine potentiometric surfaces. This comparison should also consider any changes in the hydraulic properties (hydraulic conductivity, storativity, recharge capacity) of the premine aquifers vs. post mine aquifers. (MK)

Response MuK 91

Section RP.8.5.3 has been revised to include discussion regarding the comparison of premine and postmine potentiometric surfaces.

Comment MuK 92

Reclamation Plan, RP 8.5.3 Groundwater, 92. Please discuss any changes in the interaction between the surface water and groundwater systems from the premining through the postmining phases of the operation. (MK)

Response MuK 92

The response to Comment MuK 84 describes interaction between the surface water and groundwater systems from the premining through the postmining phases of operation. In general the changes between the surface water systems and the groundwater systems are expected to be minimal. For a short time during mining it is anticipated that there will be a small (less than 6%) increase in the amount of water that recharges the coal seams from the Tongue River. Once the water levels in the coals recover, no further impacts are expected.

Comment MuK 93

Reclamation Plan, RP 8.5.3 Groundwater, 93. Please discuss the intersection of the postmining topographic and potentiometric surfaces and their effects on the location and size of groundwater-fed water bodies. (MK)

Response MuK 93

Revised Section RP.8.5.3 as requested.

Comment MuK 94

Reclamation Plan, RP 8.5.3 Groundwater, 94. Section 8.5.3, page RP-46 states, "These water quality changes can be qualitatively predicted from the overburden mineralogy and projected post mine hydrology." Please expand this discussion on projected groundwater quality. Provide a discussion on the estimated/ projected post mining groundwater quality. A detailed description of potential changes in water quality from flow through backfill/mined out areas should be included. Any potential changes to water quality in adjacent aquifers should be discussed with respect to the potential for offsite material damage. (MK)

Response MuK 94

Revised Section RP.8.5.3 text as requested.

Comment MuK 95

Reclamation Plan, RP 8.5.3 Groundwater, 95. Please provide a discussion on any anticipated water use during the reclamation period. (MK)

Response MuK 95

As discussed in Addendum MP-3, the only anticipated groundwater uses during the reclamation period are at existing water supply wells. Section RP.8.5.3 has been revised to include additional discussion.

Comment MuK 96

Reclamation Plan, RP 8.5.3 Groundwater, 96. Please address (or reference) any expected post-reclamation subsidence effects on the hydrologic system (both quantity and quality) and the plan to minimize these effects. (MK)

Response MuK 96

Section RP.8.5.3 has been revised to include discussion of expected postmine subsidence effects on the hydrologic system.

Comment SP 7

Reclamation Plan, Page RP-13. Section RP.6.2.6. In the last sentence please add that substitutions to the seed mix will be made only with WDEQ approval.

Response SP 7

Revised text in Section RP.6.2.6 as requested, the statement will now read "In the event that seed for primary species is not available, alternatives will be considered which match the life form and morphology of the primary choice only with WDEQ approval."

Comment SP 8

Reclamation Plan, Page RP-16. Section RP.6.4.1. To demonstrate that all of the unaffected acres of each vegetation community are sufficient for an extended reference area please create a table with total acres and affected acres and reference this table in this section.

Response SP 8

Table RP.6-6 has been created to display the number of extended reference acres for the respective vegetation communities. The text in Section RP.6.4.1 has been revised to include a reference to the newly created table.

Comment SP 9

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please add to the Ch. 4 reference in the first sentence on this page that the Handbook of Approved Sampling and Statistical Methods for Evaluation of Revegetation Success on Wyoming Coal Mines.

Response SP 9

Revised Section RP.6.4.1 as requested.

Comment SP 10

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please remove the first sentence in the third paragraph. It appears in conflict with the next sentence which cites Ch. 4.Sec. 2(d)(ii)(B).

Response SP 10

Removed sentence as requested in Section RP.6.4.1.

Comment SP 11

Reclamation Plan, Page RP-19. Section RP.6.4.5.1. Please add a third sentence to the first paragraph to Pastureland land use with a full shrub density greater than 1 shrub/m2 is also eligible.

Response SP 11

Sentence including pastureland land use as eligible added to Section RP.6.4.5.1 as requested.

Comment SP 12

Reclamation Plan, Page RP-24. Please revise the sentence after the ● Shrub density bullet to "Additionally, a species list will be prepared" and delete the remainder of the sentence.

Response SP 12

Revised text as requested.

Comment SP 13

Reclamation Plan, Page RP-25. Section RP.6.7.3. Under Sampling Frequency in Guideline 14 the third sample may be included as part of your revegetation success (bond release) sampling which can begin in year seven. You may add more flexability to your sampling interval such as beginning year 3 or 4, with the second sampling in year 5, 6 or 7 and then the third may be year 7 – 13 and may be used for revegetation success.

Response SP 13

Revised text per recommendations.

Comment SP 14

Reclamation Plan, Page RP-29. Section RP.7.2. There is a reference to RP.8 in this section. Please correct the reference if it is not correct.

Response SP 14

Revised text to reference Section RP.6 for seed mixtures and revegetation operations.

Comment SP 15

Reclamation Plan, Table RP6.1. Could you please add a footnote listing the disturbances that are included in the 87.3 acres of Disturbance and what the disturbances will be postmining in the 56.1 acres.

Response SP 15

Added footnote describing disturbance for premining and postmining to Table RP.6-1 as requested.

Comment SP 16

Reclamation Plan, Exhibit RP.2-1. Postmining the landuse will be Grazingland and Fish and Wildlife Habitat (937.7 acres) and Cropland (3.7 acres) with 56.1 acres of disturbance, 4.9 acres of water and 11.6 acres of wetland. These landuses will match the landuses on Exhibit D1.1-1. With just minor acreage changes shown in Table RP.6-1. Since the railroad and major roads are identified and Taylor Quarry is going to be reclaimed to Grazingland and Fish and Wildlife Habitat, the Industrial commercial stippling is not needed on these areas.

Response SP 16

Revised exhibit as requested.

Other Comments

Comment MK 27

Items Requested in Electronic Format for Preparation of CHIA, 1. Please provide a CAD or ArcGIS shapefile that contains the proposed permit boundary for the Brook Mine. This file will be used to prepare maps in the CHIA. This file can be emailed to: matthew.kunze@wyo.gov. (MDK)

Response MK 27

See response to comment MK 28.

Comment MK 28

Items Requested in Electronic Format for Preparation of CHIA, 2. Please provide the baseline surface and groundwater data collected to support baseline characterization for the permit application. All data can be submitted on Excel templates (Attachments) found on the LQD website for the Coal Annual Report Format (CARF): http://deq.wyoming.gov/lqd/coal/resources/annual-report-3/.

• Please provide all surface water flow and water quality data for the following surface water stations: SM578415-SW-1, SM578409-SW-1, SM578418-SW-1, and SM578512-SW-1.

• Please provide all groundwater level and water quality data for all Brook Mine monitoring wells shown in Table D6.2-1.

Response MK 28

The electronic data requested is being compiled in the requested format and will be provided when it is completed.

From:	Muthu Kuchanur
To:	BJ Kristiansen
Subject:	Re: Brook Mine responses to round 1 comments
Date:	Wednesday, July 29, 2015 10:27:49 AM
Attachments:	image001.jpg

Thanks BJ. It is just an observation - I have seen other mine submittals normally bold their changes and it is easy to track changes that they have made in response to the LQD comments.

In Brook mine's submittal, without that tracking mechanism, it is difficult to see exactly what they have updated without doing a line by line comparison against initial submittal.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Wed, Jul 29, 2015 at 9:10 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Muthu,
>
> I will attempt to get a WORD copy of the responses. If that is unavailable, I will let you know and you will have to maintain a separate document. You will hear from me soon.
>
> -bj
>
> **From:** Muthu Kuchanur [mailto:muthu.kuchanur@wyo.gov]
> **Sent:** Wednesday, July 29, 2015 8:38 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Cc:** Matthew Kunze <matthew.kunze@wyo.gov>
> **Subject:** Re: Brook Mine responses to round 1 comments

Hi Bj,

Thanks for the pdf version. Do you have an editable MS Word copy? My intent is to use the word document from the mine as the starting point for my review. Else, I can create a separate word document and maintain the consistency of my comment numbers.

Best regards,

Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Wed, Jul 29, 2015 at 8:35 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen,
>
> I attached the electronic version of the Brook Mine round 1 comment responses for your round 2 evaluation.
>
> -bj
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Muthu Kuchanur; matthew.kunze@wyo.gov
Subject:	FW: Brook Mine round 1 responses
Date:	Wednesday, July 29, 2015 10:41:31 AM
Attachments:	Compiled Round 1 Comment Responses.docx image001.jpg

Hey guys, here is the Round 1 responses on WORD format.

-bj

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, July 29, 2015 10:01 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: Brook Mine round 1 responses

BJ,

This should help, let me know if you need anything further

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, July 29, 2015 9:45 AM
To: Jeff Barron
Subject: Brook Mine round 1 responses

Jeff,

Do you have a WORD copy of the comments and responses from the round 1 of the Brook mine permit evaluation? Muthu would like to keep everything in the same document so his round 2 responses fit into the narrative. If not, let me know and I'll work with what we have.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

Contents

Adjudication 1
Appendix D1 2
Appendix D2 3
Appendix D3 3
Appendix D4 4
Appendix D5 5
Appendix D6 14
Appendix D7 33
Appendix D8 35
Appendix D9 37
Appendix D10 38
Appendix D11 39
Mine Plan 49
Reclamation Plan 104
Other Comments 121

Adjudication

Comment AG 1

Please also provide copies of the complaint and the answer. If there are any motions that the court has ruled on limiting or deciding any of the claims or factual or legal questions originally at issue in the case, please also provide copies of the orders, the motions, the responses to the motions, and any supporting memoranda.

Response AG 1

The Applicant's position with regard to any surface interests that may be claimed by Padlock Ranch Company and/or Big Horn Coal Company is that the Applicant alone owns the sole dominant present property right to use these surface lands for the coal mining operation described in the application, as that application has been submitted and supplemented. Applicant's sole dominant surface ownership and use interest in the relevant lands derives directly from the 1954 Deed (Attachment B) and its express reservation language. Pursuant to the controlling Wyoming Supreme Court authority set out in *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986) (Attachment C), when the Applicant already owns the dominant surface use rights for coal mining on the property, then the Applicant consents to its own use pursuant to its application by submitting the application and no other surface consents can or should be required under W.S. § 35-11-406(b)(xi). As the Land Quality Division is aware, to the extent that Padlock Ranch Company incorrectly claims some surface rights on any lands described in the 1954 Deed, it necessarily could only attempt to do so fully subject to the Applicant's sole dominant surface rights to mine coal. Under the WYOMO Fuels, Inc. decision, no consent from Padlock can be required. To the extent that Big Horn Coal incorrectly claims some surface use right in this area at this time, the Applicant is proceeding with quiet title litigation (Fourth Judicial District Court, Sheridan County, Wyoming Civil No. CV 2014-372) against Big Horn Coal on this issue and has asserted its sole dominant reserved surface right to use the surface described in the 1954 Deed to mine coal there without any consent from Big Horn Coal pursuant to the WYMO Fuels, Inc. case decision. Accurate copies of the Applicant's pending summary judgment motion arguments on this issue are enclosed with this response (attachment D and E). The Applicant can and will supplement these pleadings with further documentation that is described in the pleadings upon request.

Comment AG 2

Therefore, the Division requests the Applicant to provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch Company and Big Horn Coal Company are or are not "residential or agricultural landowners" under the statutory definition in W.S. § 35-11-406(b)(xi).

Response AG 2

Please see response AG 1.

Comment DM 1

Adjudication – Appendix B2 – Groundwater Rights – There is a groundwater well that is missing in this volume. The listing is as follows:

Barbula #2

Permit No. 85631W

Location: SW NW Section 21, T57N R84W

Please add this entry to the table and to any corresponding maps.

Response DM 1

Adjudication text page WR-12 has been updated to include Barbula # 2 (P85631W) as well as Adjudication Exhibits 5 & 8.

Appendix D1

Comment BJ 1

Appendix D1, Land Use, Table D1. 3-1; It is unnecessary to list the Expired Permit category of gas well permits. Since these APDs have expired without completion there is no related activity to the site. Listing of a non-event is not required. This also applies to the NO category since this indicates that the APD was refused, thus never became permitted through WOGCC.

Response BJ 1

Revised Table D1.3-1 as requested.

Comment SP 1

Appendix D-1. Exhibit D1.1-1. The landuses defined in Chapter 1 should be used on this Exhibit. Not the entire Brook Mine Permit falls neatly into these definitions so the following comments provide guidance:

a) The railroad, primary roads, oil and gas wells, and the facilities for Taylor Quarry would be considered Industrial commercial and may be shown with the vertical line stippling. The rest of the vertical stippling should be removed.

b) The 4.5 acres of Agricultural lands would have the Land use of Cropland. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no changes are needed to the map for this land use.

c) The 12.8 acres of water might be listed under multiple landuses such as Grazingland, Fish and Wildlife habitat or Recreational. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no change is needed to the map for this land use.

d) The 4,421.8 acres remaining should be shown as Grazingland and Fish and Wildlife habitat. The legend on the map should have Fish and Wildlife Habitat added to Past and Present Grazingland landuse. The stippled area on the map will stay the same.

e) No changes are needed to the areas identified as Recreational.

Response SP 1

Revised Exhibit D1.1-1 as requested.

Comment SP 2

Appendix D-1. Text that refers to the areas mined as Industrial commercial should be revised to remove the mining. A reference to Section 1.6 on historic mining can be made in Section D1.3.1. Grazingland. The reclaimed mined lands are now being used as Grazingland. The difference between the mined and never been mined is defined as the vegetation community that is called Reclaimed. Section D1.6 discusses the historic mining of the area and the discussion on coal mining in Industrial commercial (D1.4.3) can be removed.

Response SP 2

Revised text as requested.

Appendix D2

Comment BJ 2

Appendix D2, History, There are no comments for this section of the application. The narrative is well written and comprehensive.

Response BJ 2

No response is necessary.

Appendix D3

No comments were received regarding Appendix D3.

Appendix D4

Comment BJ 3

Appendix D4, Climatology, General comment – Is there no data for climatology that is more recent than 1990? It exists, therefore needs to be represented. Please locate and include the most recent climatological data. Twenty year-old data bears little resemblance to Sheridan County climate today so characterization of the present climate with a 20 year gap is problematic. Please reevaluate the data in light of locating and use more recent information.

Response BJ 3

Revised wind, relative humidity, and degree day data to reflect period between 1990 and 2013. Note, as can be observed by updated data, little change occurred in averages reported for wind, relative humidity, and degree days. Therefore, the wind rose provided in Figure D4.2-6 is deemed to still be representative of the Sheridan area. Revised Figure D4.2-1, Figure D4.2-11, Table D4.1-1, Table D4.2-2, Table D4.2-3, and Table D4.2-7 in response to this comment.

Comment BJ 4

Appendix D4, Climatology, Section D4.2.6, Why was 65°F used as the baseline temperature? Also, why were the high and low temperatures set to 86°F and 50°F respectively? Please clarify.

Response BJ 4

Revised text to clarify the choice of high and low temperatures.

Comment BJ 5

Appendix D4, Climatology, Figure 4.2-11, Are the degree days the total number of days that match the data points for the entire period from 1961 through 1990? This indicates that the data represented along the Y axis covers a period of 30 years on a daily basis. Please clarify.

Response BJ 5

Revised text with definitions of heating, cooling, and growing degree days to clarify Figure 4.2-11. Degree days are essentially a unit of measure like temperature, velocity, etc. A degree day signifies the number of degrees per day to heat or cool to a specified base temperature (most commonly 65°F). Each degree day is summed over the course of a month to estimate the total number of degree days that month. For example, July may have 0 heating degree days because all days are over 65°F, but will have cooling degree days nearly every day of the month. Figure 4.2-11 shows the average monthly degree days over the specified periods of data.

Appendix D5

Comment BJ 6

Appendix D5, Topography, Geology, and Overburden Assessment, Section D5.4.1, Paragraph 2 refers to "marginally suitable Selenium levels" as defined in LQD Guideline No.1. Guideline 1 has two separate sets of chemical quality criteria tables. Appendix 1 occurs on pages 17-21 as well as on pages 38-43. The first set of tables have been superseded by the second set of tables. Please use the tables on pages 38-43 when determining material suitability. The first Appendix 1 is being removed from the guideline.

The newer tables define the Selenium target as follows:

Suitable < 0.3 ppm

Marginal 0.3 – 0.8 ppm

Unsuitable > 0.8 ppm (dependent on premining water quality and overburden quality)

These values are established for uplands and ephemeral drainages unless it can be shown that Selenium impregnated materials will be buried above the groundwater potentiometric surface and below the reclaimed surface root zone. Other quality criteria have not changed.

Response BJ 6

Revised text as requested to reflect the revised LQD Appendix 1.

Comment BJ 7

Appendix D5, Topography, Geology, and Overburden Assessment, Figure D5.3-2, What units are expressed in the figure as the %g? Please include a footnote clarifying the measurement parameter.

Response BJ 7

Updated Figure D5.3-2 as requested.

Comment BJ 8

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-1, Are the Northings and Eastings in State Plane coordinates? It is assumed that they are but please verify this. The title at the top of the page could read Drill Hole Tabulations (State Plane Coordinates)

Response BJ 8

Updated as requested.

Comment BJ 9

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-2, Please rearrange the Lithologic and Electric logs in such a way that the Electric log immediately follows the Lithologic log. This allows for a more comprehensive examination of the data.

Response BJ 9

Rearranged logs as requested.

Comment BJ 10

Appendix D5, Topography, Geology, and Overburden Assessment, Holes R12-000 through R12-020 have the Northings and Eastings reversed. Please correct.

Response BJ 10

Updated as requested.

Comment BJ 11

Appendix D5, Topography, Geology, and Overburden Assessment, The Lithologic logs with the AMBRE designation 02, 03, and 04 do not have coordinates or elevations. Please provide coordinates and elevations for these three holes.

Response BJ 11

Updated as requested.

Comment BJ 12

Appendix D5, Topography, Geology, and Overburden Assessment, Hole R13-018 appears to have erroneous coordinates. The Northing is listed as 11,941,802. It should probably be 1,941,802. The elevation is shown as 43,887.9, where it should probably be closer to 3,887.9. Please verify and correct.

Hole R13-024 has a very high Northing at 61,941,541 and elevation at 73,885.4. These may be 1,941,541 and 3,885.4, respectively. Please verify and correct

Response BJ 12

Updated as requested.

Comment BJ 13

Appendix D5, Topography, Geology, and Overburden Assessment, A suggestion for future exploration: Ask the geophysical logger to reduce the gain on the gamma logs. The readjustment bounce on the logs makes them a bit difficult to read and interpret.

Response BJ 13

No response required.

Comment BJ 14

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-5, Pg. D5-5-4, The splitting tensile strength tests were run on four (4) samples from two (2) holes representing roof, coal, and floor conditions.

a) Why were these locations used as representative of the lithologies encountered during mining?

b) Are these few samples representative of all conditions expected to be encountered by the continuous miner (CM)?

Please elaborate and clarify the narrative. A statement must be made that strength testing will be performed on at least one set of samples per mining panel prior to use of the CM to insure that conditions are favorable for roof retention without subsidence. Lithology in this area is inconsistent and rock strength can vary accordingly. Using the data provided on the four samples tested indicates that some of the overburden from hole R13-19 is unsuitable for highwall mining, based on the CAT® Site Evaluation Tool For Highwall Miners;

(http://webtools.cat.com/globalmining/highwallminers/index.html).

Response BJ 14

Appendix D5 Section D5.3.3.2 has been updated as requested.

Comment BJ 15

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-4, Exhibits 1 – 7, Please include the drill hole locations on these isopach maps.

Response BJ 15

Updated as requested.

Comment BJ 16

Appendix D5, Topography, Geology, and Overburden Assessment, Exhibit 8, The map labeled as the isopach map of the Lower Masters bed is a contour of a surface. Please replace the contour map with the appropriate isopach map

Response BJ 16

Updated as requested.

Comment BJ 59

EXHIBITS, Addendum D5-4, Exhibit 1, The title on the map declares that this is an overburden isopach, but the bed name is missing. Please indicate which bed this map pertains to.

Response BJ 59

Updated Exhibit 1 of Addendum D5-4 as requested.

Comment BJ 60

EXHIBITS, Addendum D5-4, Exhibit 8, The name of the PDF file for this exhibit indicates that this is an isopach map of the Masters Lower coal bed. The title in the map indicates that this is the contour of the base of the Masters coal seam. Please correct the title of the PDF file.

Response BJ 60

The title of Exhibit 8 of Addendum D5-4 will be revised in the electronic copy, as requested.

Comment BJ 61

EXHIBITS, Addendum D5-6, Exhibit 1, We commend RAMACO for sampling overburden locations on 80 acre spacing. There are some gaps in the sampling plan, however, that need to have core holes drilled to fill them. The underground Coal Rules and Regulations in Chapter 7, Section 1(a)(i) are specific on ensuring that overburden geology is characterized in all locations where overburden will be removed or subsidence may occur. This essentially means that all areas above the planned coal panels need representative cores drilled to a sufficient density, approximately one hole for every quarter section of affected area. Based on that, the following locations still need to be characterized by overburden sampling:

NE1/4, sec.22, T.57N., R.84W.

NW1/4, sec.15, T.57N., R.84W.

NW1/4, sec.14, T.57N., R.85W.

SE1/4, sec.10, T.57N., R.85W.

Response BJ 61

A drilling rig was not able to enter the areas NW1/4, Sec.14, T.57N., R.85W and SE1/4, Sec.10, T.57N., R.85W. due to the steepness of the terrain, therefore no samples were obtained. Sampling data for drill holes BH 166-78 and BE 326-78 have been incorporated into Addendum D5-2 and Addendum D5-7 to characterize the overburden in Sections 15 and 22.

Comment BJ 62

EXHIBITS, Addendum D5-6, Exhibit D5.1-1, Kudos to the staff member that created this slope analysis map. It is clear and concise and the histogram is very informative. Good job.

Response BJ 62

Thank you for this comment.

Comment DS 1

Appendix D5, The Coal Rules and Regulations, Chapter 7, Section 1(a)(i)(A) states that information required for the geological description pursuant to Chapter 2, shall be as follows: for areas where surface operations and facilities will cause removal of overburden down to a level of the coal seam, all information outlined in Chapter 2. Overburden sampling has not been performed in many of the locations where overburden will be removed during the mining operations. Additional sampling will be required to assess overburden chemistry in all areas where overburden removal will occur. The intensity of sampling should be 1 core per 160 acres (per quarter section). The LQD requests sampling every 1,900 linear feet on longer proposed disturbance areas or, at minimum, two cores within shorter disturbances separated sufficiently to provide a representative characterization of the proposed disturbance.

> a. Not all overburden has been characterized during analysis. Several lenses of shallow coal mixed with partings or narrow coal seams that will not be mined were not characterized. Because all overburden must be handled so as not to negatively affect surface water, groundwater or vegetation, all overburden must be adequately characterized. Therefore, the LQD requests additional characterization of all overburden that will be backfilled into disturbed areas. It must also be stated that special handling and/or identification and use of topsoil/subsoil replacement may be required if unsuitable backfill or soil is placed within 4 feet of the surface on upland areas or within 10 feet of the surface in stream channels.

Response DS 1

Please see response to BJ 61.

Comment DS 2

Appendix D5, Section D5.4. – documentation of protocols that differ from those approved by the Administrator in Guideline 1 typically require a signed document by LQD staff, not a request for different procedure signed by the company. This issue has been discussed with other mining companies and it has been determined that documentation of approval by LQD staff will be required if sampling/analytical protocols differ from those required by standing LQD policy. Please provide documentation of LQD staff approval for the 10-ft. overburden sampling interval.

Response DS 2

See Attachment A to this response package. This has also been added to Addendum D5-6 pages 4 and 5.

Comment DS 3

Appendix D5,Table D5.4-1 and Table D5.4-2 do not provide the current approved selenium concentration limits of 0-3 ppm (suitable), 3-8 ppm (marginal) and > 8 ppm (unsuitable). Please be sure to include the current approved suitability criteria as shown in Guideline 1, page 42. This will change the conclusions of the discussion provided in the Appendix D5 text. Also, in Table D5.4-2, please provide the correct units for analytical results in mg/Kg, not mg/L.

Response DS 3

Please refer to BJ 6 response. Appendix D5 text, Table D5.4-1, and Table D5.4-2 are updated as requested.

Comment DS 4

Appendix D5, The permit application provided to LQD staff for review has duplicated data provided after the map identified as Exhibit 1 which should be deleted. The exhibit should also be better identified as Exhibit D5-1 or something similar to clarify placement in the permit application should it become separated from the document in the future.

Response DS 4

The electronic copies were provided to LQD staff for review purposes. The hard copy on file is the official version. Also, please see response to Comment DS 5.

Comment DS 5

Appendix D5, Comparisons were made between Exhibit 1, the soils map and the Mine Plan map. Distinct differences in the affected area and permit boundaries were observed. Please be sure that correct boundaries for the proposed affected area and permit area are provided on all maps. Please also provide the contour interval on this exhibit.

Response DS 5

Addendum D5-6 is a copy of the overburden sampling plan as presented to WDEQ on 8/26/2013, which referenced Exhibit 1. Therefore, no changes to the exhibit will be made.

Comment KM 2

Appendix D5, Page D 5-9 refers to samples collected from roof and floor from "many" locations throughout the permit area. However, supporting documentation appeared to be from only two borings and included two roof and one floor sample. In addition, the laboratory noted the floor sample did not have sufficient length and a correction factor was used to determine unconfined compressive strength. Additional structural analysis of the overburden, interburden and floor is required.

Response KM 2

During preparation of the MSHA Ground Control Plan additional coring of the coal and overburden will occur, data gathered from this activity will be supplied to WDEQ/LQD when it is received. Please see response to BJ 14.

Comment KM 3

Appendix D5, Please provide a discussion of the structural analysis of the overburden and interburden. The discussion shall address the potential for subsidence during and after mining.

Response KM 3

Structural analysis of the overburden, interburden, floor, and roof must be conducted for the MSHA Ground Control Plan. Information gathered for this plan will be provided when it is received. No text was updated in response to this comment. Please see response to BJ 14.

Comment KM 4

Appendix D5, Please discuss the aquifer(s) below the lowest coal seam and the potential for mining to impact these aquifer(s).

Response KM 4

The lowest coal seam targeted for mining is largely dry and is also confined by a clay layer. The underburden is not considered an aquifer therefore no impacts will occur.

Comment Muk 1

Appendix D5, Section D5.3.3.2 Overburden and Interburden, 1. This section provides a discussion of the thickness of interburden and not overburden. Please provide a discussion (or a reference) on the thickness of the overburden. (MK)

Response Muk 1

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.2.

Comment Muk 2

Appendix D5, Section D5.3.3.3 Coal, 2. On Page D5-10, there is a good discussion about the thickness of the two coal seams. Please provide a description on the depth from land surface to these coal seams. (MK)

Response Muk 2

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.3.

Comment Muk 3

Appendix D5, Section D5.3.3.3 Coal, 3. Page D5-10 states, "Monarch seam exist within isolated portions of the mine areas as shown on the geologic cross sections in Addendum D5-3 and may present a secondary target." However, Table D5.3-2 does not provide the coal quality characteristics for Monarch coal seam. If monarch seam is part of the mine plan, please include the coal quality characteristics of Monarch coal seam in Table D5.3-2 and a description of thickness and depth from land surface.

Response Muk 3

Table D5.3-2 has been updated with the coal quality characteristics for the Monarch seam. The overburden and seam thickness are included on the geologic cross-sections located in Addendum D5-3 referenced in the text.

Comment Muk 4

Appendix D5, Section D5.3.3.3 Coal, 4. Please include a discussion on Dietz (1, 2, 3) coal seams, if they are present in the mine permit boundary. If they are part of the mine plan, please include the coal quality characteristics in Table D5.3-2. (MK)

Response Muk 4

Discussion about the Dietz seams has been added in Section D5.3.3.3. These coal seams are not part of the currently proposed Mine Plan. Therefore, the quality data were not included in the table.

Comment Muk 5

Appendix D5, Section D5.3 Geology of Mine Area, 5. Please provide a description of the stratigraphic units below the Masters coal seam. (MK)

Response Muk 5

Section D5.3.3.4 has been added to discuss the underburden.

Comment Muk 6

Appendix D5, Addendum D5-3 Geologic Cross Sections, 6. Several of the geologic cross sections show UNK – unknown coal seam (Stringer). Please include a brief discussion about this stringer in Section D5.3.3.3 (MK)

Response Muk 6

Discussion about the stringers with unknown names has been added to Section D5.3.3.3.

Comment Muk 7

Appendix D5, Addendum D5-4 Isopachs, 7. Please include the wells/drill holes (control points) used to interpret the isopachs and elevation contours in the maps. In addition, label all the control points with names and the thickness (or elevation, as appropriate). This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Response Muk 7

Addendum D5-4 Exhibits 1 to 8 have been updated with drill hole locations as requested. A reference to Addendum D5-2 has been added to the exhibits for seam name and thickness.

Comment Muk 8

Appendix D5, Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table, 8. Please describe these analyses, methodology, results and provide an interpretation of their applicability to the mine/reclamation plan. (MK)

Response Muk 8

Please see response to BJ 14.

Appendix D6

Comment BJ 17

Appendix D6, Hydrology, Section D6.2.3, Pg. D6-20, Narrative in the last paragraph – why were no samples taken in Hidden Water Creek? Please explain.

Response BJ 17

No flow was observed in Hidden Water Creek during baseline sampling, so no samples were taken. The text has been revised to reflect that there were no flows observed.

Comment BJ 18

Appendix D6, Hydrology, Table D6.1-8, Regarding the HEC-RAS modeling results – The values for Hidden Water Creek and Slater Creek are identical. Is this accurate or is it a typographical error? Please clarify.

Response BJ 18

Updated table to remove typographical error.

Comment BJ 19

Appendix D6, Hydrology, Addendum D6-7, The well construction summary sheets need to have the coal bed names listed on the well lithology sections to the right of the well diagrams. Please label accordingly.

Response BJ 19

Updated as requested.

Comment BJ 20

Appendix D6, Hydrology, Attachment D6-8-A, Pg. D6-8-20, A statement is made that water within both coal seams is expected to be "high quality" and "good" water. Please define the meaning of those characterizations. Are these judgments based on MCLs or some other value? Are they being classified by some constituent values? Or is there another metric being used? Please clarify.

For example; referencing WQD R&R, Chapter 8, Table I, Class I,II, or III would better define the essential characteristics of the water quality. Numerical values of critical constituents, such as TDS, could also serve to define the quality as "good". More descriptive qualifiers are needed to judge the water quality.

Response BJ 20

Revised text as requested.

Comment BJ 21

Appendix D6, Hydrology, Attachment D6-8-E, Hydrographs, The x parameter, time, is depicted in days. It appears that this scale should have been adjusted to show time in hours due to the rapid changes seen in the hydrographs. Please use a finer scale for the x axis.

Response BJ 21

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-36a and D6-8-37a. These additional hydrographs detail the water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 22

Appendix D6, Hydrology, Attachment D6-8-F, The above mentioned comment can also be applied to the Carney well hydrographs. Please adjust the x axis to hours.

Response BJ 22

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data as well. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-39a and D6-8-40a. These additional hydrographs detail the water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 23

Appendix D6, Hydrology, Addendum D6-9, Pg. D6-9-2, Please include a column in Table D6-1 that indicates the elevation of the bottom of the well or TD. The total water column is important when assessing groundwater characteristics. Please correct.

Response BJ 23

Table D6-1 has been revised as requested.

Comment BJ 24

Appendix D6, Hydrology, Addendum D6-10, Pgs. D6-10-28 through D6-10-53, On the sample analysis reports, Please provide a brief narrative at the beginning of the lab results to give context to the data. Footnotes on the pages refer to MCLs or other parameters of water quality used for classification. However, the context that is used to define these parameters is missing. The assumption is made that these quality values are derived from the WQD R&R, Chapter 8, Table I definitions. But that is

uncertain as no frame of reference is given. A brief sentence or two at the beginning of the section would clarify the numerical standards used in the report. Please adjust the narrative accordingly.

Response BJ 24

Page D6-10-27a was added to provide the requested narrative.

Comment BJ 25

Appendix D6, Hydrology, Please include the lithology of the sampled zone, either in the sampling information sheets, or on the sample analysis reports. Identification of the lithology sampled needs to be readily available with the analysis. This applies to all increments sampled. The sampled zones do have identification on the sample sheets with a shorthand nomenclature but persons unfamiliar with the lithology of the prospect area would be at a disadvantage when evaluating the sample results. A simple reference table at the beginning of the section would be sufficient. Foe example; MST=Masters, CRN=Carney, AL=Alluvium. Non-geologists need some frame of reference. Please create a clarifying narrative.

Response BJ 25

Reference text with abbreviations defined has been added on page Addendum D6-10-27a, as requested.

Comment DM 2

Appendix D6-Hydrology, D6.1x – The drainage basin description and surface water quantity sections are lacking detail. As mentioned in M. Kunze's comments, the data from the terminated Slater Creek USGS gauge, and historical monitoring data from Big Horn Mine (permit no. 213) should be included.

The data collected at the monitoring stations that is presented in Addendum D6-4 does not appear to agree with the statement that Slater Creek is a "predominantly ephemeral" stream. Please reconcile the text with the data.

Response DM 2

Peak flow data from the USGS gage station on Slater Creek has been provided. See response to MK 30. The text in Section D6.1.5.2 has been updated to clearly indicate that Slater Creek is an ephemeral stream.

Comment DM 3

Appendix D6-Hydrology, D6.2.4 States that Groundwater Rights are in Appendix E2 of the Adjudication Volume. Groundwater Rights are actually listed in Appendix B2. Please Correct.

Response DM 3

Text revised as requested.

Comment KM 5

Appendix D6, 2. The pre-mining potentiometric map for the Masters coal seam shows the elevation of the groundwater at a higher elevation than the surface elevation in Sections 11 and 12 (in the vicinity of Slater Creek outside of the permit area). Either show the potentiometric surface as doted across this area or revise the potentiometric lines such that the groundwater elevation is below the ground surface elevation. Issue addressed by BJ Kristiansen. Please see comment No. 65.

Response KM 5

Exhibits D6.2-2 and D6.2-3 have been revised as requested.

Comment KM 6

Appendix D6, 3. The groundwater elevation for the Carney coal seam in monitor well 578417-CRN was given as 3795.59. The potentiometric contour for 3800 is drawn south of this monitor well. Please correct the contour line to be consistent with the groundwater elevation shown for monitor well 578417-CRN. Correction of this contour line may also adjust how the contour lines for 3780 and 3760 are drawn, such that they may be drawn consistent with other contour lines.

Response KM 6

Contours in Exhibit D6.2-3 have been revised as requested.

Comment KM 7

Appendix D6, 4. Page D6 8-8: The text refers to the pump test in the Carney coal seam. According to the procedures in the previous section, transducers were placed in CRN and CRN-OB; however on the referenced page, it states transducers remained in MST and MST-OB after pumping. LQD believes this to be a typographical error.

Response KM 7

LQD is Correct, this is a typographical error. The sentence should read "After the pumping period, the transducers remained in CRN1 and CRN-OB until 8:00AM on November 16, 2013. Page D6-8-8 has been updated with the typographical error corrected and a replacement page is included.

Comment KM 8

Appendix D6, 5. Please discuss why the water levels rose in the Carney coal seam during the pump test in the Masters coal seam.

Response KM 8

This comment is addressed in comment 19 from Muthu Kuchanur.

Comment KM 9

Appendix D6, 6. What effect would a leaking pump have on the results of the pump test in the Masters coal seam?

Response KM 9

This comment is assumed to originate from the note on page Addendum D6-8-30. This note is in reference to activities that occurred immediately after the pumping test was shut off. The pump used for the pumping test did not have a foot valve. Therefore, after the pump was shut off, water in the discharge pipe immediately began to drain back into the well. The pump and piping was pulled out of the well as fast as possible and not all of the water in the pipe drained back into the well. However, the personnel conducting the pumping test were concerned that the water draining into the well would result in a rapid rise in the water level in the well and wanted to note it for the record on the field data sheet. It is estimated that less than 2 gallons of water actually drained out of the line into the well while the pump was being pulled which would result in a water level rise in the well of less than 0.25 foot. Given that the water level recovery in the well was very rapid immediately upon cessation of the pumping test (approximately 2 feet in the first ten minutes after the pumping test ended) and the early time recovery data was largely ignored for the purposes of doing the aquifer characterization evaluations, the leaking pump would not have had an impact on the results of the pumping test.

Comment KM 10

Appendix D6, 7. Please make sure all maps that are stamped are also signed and dated by the engineer, as required by regulation.

Response KM 10

All maps that are stamped will be signed and dated by the engineer as required by law. This does not include digital versions. The digital copies have been provided for WDEQ review. The hard copy is the official copy.

Comment MK 29

Appendix D6-Hydrology, Section D6.1.2 Drainage Basin Description, 3. On Page D6-2 it is stated that Slater Creek is an ephemeral stream. Aerial imagery shows a riparian area with trees and subirrigation occurring along much of the channel. PEM wetlands are also present as documented in Appendix D10. It would seem that an ephemeral stream may not be able to support these features. Please provide the justification why Slater Creek is considered an ephemeral stream, and that the stream does not contain

intermittent characteristics where it is not below the local water table for a portion of the year. (MDK)

Response MK 29

Please see response to DM2.

Comment MK 30

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 4. The USGS operated a peak flow gage on Slater Creek from 1967 to 1981 (Station No. 06299900, http://nwis.waterdata.usgs.gov/wy/nwis/inventory/?site_no=06299900&agency_cd=USGS). The gage was located just downstream of the proposed permit boundary near the confluence with the Tongue River. Please incorporate the annual peak flow data from this station into the permit application to illustrate the range of peak flows that might be expected from Slater Creek. (MDK)

Response MK 30

The text and Tables D6.1-2 and D6.1-3 have been revised to include peak flow data for USGS Station No. 06299900.

Comment MK 31

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 5. Some of the U.S. Army Corps of Engineers references cited in the text (2000, 2001) do not appear in the References Section (Section D6.3). Please add these to the references list. (MDK)

Response MK 31

The text edits have been made as requested.

Comment MK 32

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 6. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section D6.3. (MDK)

Response MK 32

The text edits have been made as requested.

Comment MK 33

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 7. Please explain in the text if the existing impoundments (stock reservoirs, old mine pits, etc.) in both the Slater Creek and Hidden Water Creek drainages were considered in the routing functions for

the HEC-HMS runoff estimates. These features would likely have an effect on attenuating peak flows. (MDK)

Response MK 33

The text has been revised to clarify the impoundments are not included the HEC-HMS model. As described, peak flow estimates should be conservatively high without attenuation of storm events by impoundments.

Comment MK 34

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 8. As the text states on Page D6-5, the HEC-HMS runoff estimates in Table D6.1-7 are higher than the Miller (2003) equation estimates. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) equation estimates.

The Miller (2003) equation for this region used, in part, data from the USGS peak flow gage on Slater Creek, so it would seem that the Miller (2003) estimates may be more reasonable. For example, compared to the HEC-HMS estimates, the 15-year record from the peak flow gage on Slater Creek would not register at anything greater than a five-year event. Furthermore, the May 18, 1978 event on Slater Creek resulted in a peak flow of 1,100 cfs, which according to the HEC-HMS estimates would only be around a 2-year event. USGS studies have shown that the May 1978 flood event was estimated to be a 100-year event on some parts of the Tongue River in this area (http://pubs.usgs.gov/pp/1244/report.pdf). (MDK)

Response MK 34

A discussion in the text has been included that speaks to why the HEC-HMS results are higher than the Miller results. Additionally, a discussion acknowledges the report by the USGS on the May 1978 flood. The Miller analysis does appear to more closely estimate the peak flowrates for flood events for the short data record on Slater Creek. However, hydraulic calculations will continue to use the HEC-HMS results because of the conservative results and the ease in comparing to the postmining hydrologic environment. HEC-HMS provides a way to change the properties of the drainage basins to reflect what will be present postmining, and the comparison between the premining and postmining HEC-HMS models quantifies the magnitude of the impact the Brook Mine will have on the hydrologic balance.

Comment MK 35

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 9. Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

Response MK 35

The locations of the surface water monitoring sites have been reported to the quarter-quarter, which is an adequate level of accuracy to report the monitoring locations.

Comment MK 36

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations,10. On Page D6-8, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

Response MK 36

The text has been revised as requested.

Comment MK 37

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 11. On Page D6-8, second paragraph, it states that increased E.Coli from samples collected in 2006 were attributable to high flows in May-June 2010. Were the samples also collected in 2010 and not 2006? Please revise this sentence. (MDK)

Response MK 37

The sentence was revised to read more clearly. The sentence was saying that samples taken in 2010 experienced an increase in E.Coli bacteria compared to the samples collected in 2006.

Comment MK 38

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 12. On Page D6-8, second paragraph, it would be informative to add that, in addition to the SCCD, other entities such as the Big Horn Mine, USGS, and WDEQ/WQD have collected water quality data on the Tongue River and Goose Creek near the proposed mine. It may also be informative to mention that sections of the Tongue River in the vicinity of the proposed mine are on the State's 303(d) list since certain uses are not supported due to impaired water quality. Goose Creek has also been on the 303(d) list in the past and a TMDL has been prepared. Information can be found at: http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/ and http://deq.wyoming.gov/wqd/tmdl/. (MDK)

Response MK 38

The text has been revised as requested. Refer to Section D6.1.5.1.

Comment MK 39

Appendix D6-Hydrology, Section D6.1.5.2 Surface Water Quantity, 13. The Big Horn Mine (WDEQ/LQD Permit 213) operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. This station was located approximately ¼ mile upstream from station SM578415-SW-1 that was installed by the Brook Mine. The LQD Hydrology Database contains mean daily flow data from this station from 1982 to 1997, although several years are missing data. Baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request or a more complete dataset may be available if requested from the Big Horn Mine. (MDK)

Response MK 39

Please see response to DM 2 and MK 30.

Comment MK 40

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 14. Please briefly discuss in the text the water quality results from Slater Creek in the context of WQD Surface Water Quality Standards for Class 3B waters (see Chapter 1 of WQD Rules and Regulations). This would reveal whether or not designated uses were being met prior to mining. The two samples from Slater Creek indicate no exceedences of Class 3B criteria, indicating uses are supported. (MDK)

Response MK 40

The text has been updated as requested.

Comment MK 41

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 15. It is understood that water was not flowing in Hidden Water Creek so the applicant could not collect a sample for baseline purposes. However, as previously mentioned, the Big Horn Mine operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. The LQD Hydrology Database contains nine water quality samples collected at this site from 1979 to 1989. Baseline characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request. (MDK)

Response MK 41

Request for information is pending. No update to the permit has occurred at this time in response to this comment.

Comment MK 42

Appendix D6-Hydrology, Section D6.1.5.4 Sediment Transport, 16. This section would be enhanced by including data from a single sediment sample collected on Slater Creek at USGS Station No. 06299900 (peak flow gage previously discussed in Comment No. 4). This sample was collected in June 1967 at a flow of 18 cfs. The TSS was 11,600 mg/L and the suspended sediment discharge was 564 tons/day. (MDK)

Response MK 42

The text has been revised to include the additional sediment sample as requested.

Comment MK 43

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 17. A rating curve developed using only the Manning equation will provide only a rough estimate of flows given the uncertainty in the Manning's roughness coefficient. It is recommended that direct discharge measurements also be taken over time to help evaluate the rating curves developed for the four monitoring sites. (MDK)

Response MK 43

The rating curves were developed for ephemeral streams that flow infrequently enough that water measurements cannot be taken at regular intervals. Manning's equation provides a reasonable and widely accepted mathematic approximation of stream flow rates.

Comment MK 44

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 18. Given the uncertainty in the Manning equation, the estimated flow rates provided in Table D6-3 and Attachment D6-5-A (Rating Tables) are reported at much too high a level of precision to be meaningful. Depending on the magnitude of the flow estimate, there should be only one or two significant figures provided. For example, 0.29 cfs = 0.3 cfs and 3,584.38 cfs = 3,600 cfs. Please revise these tables. (MDK)

Response MK 44

Summary Table D6-3 has been revised to engineering precision (no more than three significant figures). The values in Attachment D6-5-A are essentially raw data that are being reported to that magnitude to show the validity of calculations and to aid in curve development. Being raw data, the values were not revised from those previously reported.

Comment Muk 9

Appendix D6, Section D6.2.1 Regional Hydrogeology, 9. Page D6-12 states, "The potential groundwater in the formation as capable of yielding small quantities of water

for domestic and stock use". Please consider providing a range of estimates for well yields based on literature review or from the baseline data collected by the Brook Mine. (MK)

Response Muk 9

The text has been revised to indicate that coal is the only regional shallow aquifer that has a sufficient quantity of water to support domestic and stock use.

Comment Muk 10

Appendix D6, Section D6.2.1 Regional Hydrogeology, 10. The description in this section discusses only about the Fort Union formation. Please provide a description of the overlying and underlying water-bearing formations (aquifers) and describe their hydrogeologic characteristics (flow direction, gradients, aquifer properties, general outcrop locations) on a regional context. It is noted that some of the overlying formations may be dry or discontinuous within the mine permit boundary. (MK)

Response Muk 10

Section D6.2.1 has been updated as requested.

Comment Muk 11

Appendix D6, Section D6.2.1 Regional Hydrogeology, 11. Page D6-12 states, "The overburden is comprised of sand lenses, clinker and alluvial that have the potential of water bearing bodies. Due to the topography in this area, the valley cut through these deposits. Therefore, they are discontinuous and would not hold large quantities of water." It is noted that they are discontinuous and would not hold large quantities of water. Please provide additional justification for this statement by using the hydrogeologic data collected by the Brook Mine including any reference to the interpreted extent of dry zones based on drill holes, monitor wells and other applicable data. (MK)

Response Muk 11

Section D6.2.1.1 has been updated as requested.

Comment Muk 12

Appendix D6, Section D6.2.1 Regional Hydrogeology, 12. Please clarify if there were groundwater springs or seeps observed in the areas within or adjacent to the mine permit boundary. Include a discussion (or reference) on the surface water - groundwater interactions.(MK)

Response Muk 12

Section D6.2.2.5 has been updated as requested.

Comment Muk 13

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 13. Page D6-13 states, "No monitoring wells were completed in the overburden or interburden as no water was found in these units during drilling operations". This information is critical in demonstrating the overlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (both overburden and interburden) and their depths that were used to make this determination. (MK)

Response Muk 13

Section D6.2.2.1 has been updated as requested.

Comment Muk 14

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 14. Page D6-13 states, "Also one well 578409-MST-UB showed the presence of water in the underburden, while all the other wells drilled into the underburden were dry and therefore not completed as wells." Similar to the previous comment, this information is critical in demonstrating the underlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (underburden) and their depths that were used to make this determination. (MK)

Response Muk 14

Please see response to Muk 13.

Comment Muk 15

Appendix D6, Section D6.2.2.2 Aquifer Tests, 15. Page D6-15 states, "Alluvial materials were also not analyzed during the aquifer testing." The alluvial aquifer materials are one of the key factors in determining any impacts caused by mining to the alluvial aquifer. Alluvial aquifer tests will be helpful in understanding any surface water – groundwater interactions. Please provide justification for not conducting any aquifer tests in the alluvial wells. (MK)

Response Muk 15

The text in Section D6.2.2.2 has been updated.

Comment Muk 16

Appendix D6, Section D6.2.2.2 Aquifer Tests, 16. Please provide justification for not observing the groundwater level responses in the alluvial aquifer during the two aquifer tests conducted by Brook mine. (MK)

Response Muk 16

No alluvial material was present in immediate vicinity of the clusters used for the pumping tests, hence there was no alluvial aquifer to monitor. Hidden water creek located to the east of the tested well cluster would be potentially the nearest location of alluvial material, however as noted in Appendix D11 the fill material in Hidden Water Creek is more colluvial than alluvial.

In addition, as shown on the well completion summary logs in Addendum D6-7, multiple claystone intervals are located between the Carney Coal and the surface at the well cluster where the pumping tests were conducted. The top of the Carney Coal is approximately 90 feet below ground surface at the cluster well location which is approximately 50 feet below the level of any colluvial/alluvial deposits in Hidden Water Creek. Similarly, the potentiometric head in the Carney coal is some 50 feet below the level of the colluvial/alluvial deposits in Hidden Water Creek and if there were a direct hydraulic connection, there would be no water in the Hidden Water Creek colluvium/alluvium. Given the confining intervals between and the significant difference in potentiometric head between the Carney Coal and the Hidden Water Creek colluvium/alluvium, additional shallow monitoring above the Carney Coal was not necessary.

Comment Muk 17

Appendix D6, Section D6.2.2.2 Aquifer Tests, 17. Page D6-16 states, "A report of these tests can be found in Addendum D6-8 and summary tabulation of the aquifer test results is included in Table D6.2.2". Please consider including a comparison of these estimated aquifer properties with the aquifer tests conducted in other similar coal seams in the Powder River Basin (Example: Bighorn Mine). Given the number of tests conducted by the mine, this will increase the robustness of the reported estimates from the two aquifer tests. (MK)

Response Muk 17

As requested aquifer test results from Big Horn Coal Company and from the Youngs Creek Mine were added to the text.

Comment Muk 18

Appendix D6, Section D6.2.2.2 Aquifer Tests, It is noted that the aquifer tests were conducted for ~640 minutes. Will an increased aquifer test duration change the observed lack of interaction between the coal seams and the underburden? Please clarify with a brief description. (MK)

Response Muk 18

Given the head differences between the static water levels in the Carney Coal, Masters Coal, and the underburden it is unlikely that additional pumping would have resulted

in any impacts to the water levels in the underburden. As shown on Table D6-2, (page Addendum D6-8-13) the initial water level in the Carney Coal was approximately 11.5 feet higher than the water level in the Masters Coal and the initial water level in the Masters Coal was approximately 9 feet higher than the initial water level in the underburden well. If there were a hydrologic connection between the aquifers, it is likely that the water levels in the aquifers would have already come into equilibrium.

Comment Muk 19

Appendix D6, Section D6.2.2.2 Aquifer Tests, 19. The referenced Addendum D6-8, Table D6-2 shows an increase in water levels in two of the Carney coal seam observation wells during the Masters coal seam well pumping test. Please provide an explanation for this increase in water levels during the aquifer test. (Noordbergum effect?). (MK)

Response Muk 19

Upon review of the raw data collected during the pumping test it was noted that the drawdowns reported in Tables D6-2 and D6-3 were incorrectly reported. Replacement tables are included with this round of comment responses. As shown on the updated version of Table D6-2, the water level in both Carney observation wells (CRN-1 and CRN-OB) increased by 0.23 feet during the Masters coal pumping test. While the Noordbergum effect or other natural phenomena such as earth tides could have potentially influenced the water levels in adjacent aquifers during the pumping test, the increase in water levels can be largely attributed to barometric pressure changes. Water levels in the Carney observation wells were monitored using hand held electric lines and there were no adjustments for barometric pressure reported in Table D6-2. No site specific barometric data was collected during the pumping test period. However, to evaluate how barometric pressure changes may have impacted water levels in the wells, barometric data from the automatic weather observing station (AWOS) at the Sheridan County airport was obtained from the National Oceanic and Atmospheric Administration (NOAA) database. Barometric data from the Sheridan County Airport AWOS site was compared to water level measurements in Attachment D6-8-K. The data in Attachment D6-8-K demonstrates a clear correlation between barometric pressure and water level variations in the Carney coal monitor wells during the Masters coal pumping test. Generally over the course of the Masters coal pumping test the barometric pressure went down (roughly 0.31 feet). A decrease in the barometric pressure is expected to result in an increase in water levels in a confined aquifer like the Carney coal aquifer which is what was observed.

Similar increases in water levels were also noted in the Masters Coal observation wells (MST-1 and MST-OB) during the Carney pumping test as noted on Table D6-3. Attachment D6-8-K demonstrates a clear correlation between decreasing barometric pressure and rising water levels in the Masters coal observation wells during the Carney Pumping test. In addition, during the Carney coal pumping test, water levels

in the Masters coal observation wells were still recovering from drawdowns induced during the Masters coal pumping test which may also have contributed to rising water levels in the Masters coal. The increase in water level measured in the Masters coal observation wells is attributed to a combination of continuing water level recovery and barometric effects.

Only very minor water level variations in the Masters underburden well (MST-UB) were noted during both pumping tests. As shown on the well completion form in Addendum D6-7, (Page D6-7-8) MST-UB was completed in an interval that was predominately claystone and the estimated yield is less than 2 gpm. Essentially the strata in which MST-UB is completed is more of an aquitard than an aquifer. As a result, it takes a lot longer for the water levels in the well to adjust to changing atmospheric pressure because water does not enter or discharge from the formation very fast. The lack of barometric responses in the MST-UB are attributed to the fact that the low yielding aquitard in which the well is completed has a lower barometric efficiency than the wells completed in the coal aquifers.

Vented transducers utilized to monitor water levels in the both the pumping and adjacent monitor wells during each pumping test, automatically compensated for the barometric pressure effects. Therefore, barometric pressure effects did not affect the aquifer analyses that were developed based on the pumping test data.

Comment Muk 20

Appendix D6, Section D6.2.2.2 Aquifer Tests, 20. Please provide a discussion (or reference) on the role of faults in the results of aquifer tests. (MK)

Response Muk 20

As noted in Addendum D6-8, (page D6-8-9) no hydrologic boundary conditions were observed in the pumping test data. As can be seen on Exhibit D6.2-2, the 578409 well cluster is located approximately 2,100 feet south and east of the nearest mapped fault. Since neither the Carney nor the Masters coal seams are very robust aquifers and have low transmissivity values, it is not surprising that the fault would not influence the pumping test results. For example, using Theis drawdown equations and the aquifer characteristics measured in the Masters coal (transmissivity of 3.2 ft^2/day, storitivity of 0.00025, and a pumping rate of 0.5 gpm) it is estimated that it would take over 70 days of continuous pumping for a water level response greater than 0.5ft to be observed 2,000 feet away. Therefore the likelihood that the faults would have influenced the pumping test results is very low.

Comment Muk 21

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 21. Please provide some additional discussion on the premining potentiometric surface maps, including

ranges of estimated hydraulic gradients and groundwater velocity in the different coal seams/aquifers. (MK)

Response Muk 21

As requested, additional discussion on the hydraulic gradients and groundwater velocity in the coal seams were added to Section D6.2.2.4.

Comment Muk 22

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 22. Please provide a discussion (or reference) on the hydrologic effects of any adjacent operations (including past coal mining activity by historic mines and Bighorn mine) on the premining information and data. (MK)

Response Muk 22

The last paragraph in Section D6.2.2.4 describes how CBNG production has affected water levels in the eastern side of the permit area. The drawdowns resulting from CBNG production have occurred since any historic coal mining activity and have superseded any drawdowns that may have occurred due to historic mining. Therefore, no lingering hydrologic effects from past coal mining activities are present. The text in the last paragraph in Section D6.2.2.4 has been updated to describe how CBNG impacts have superseded any impacts from historic coal mining activities.

Comment Muk 23

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 23. This section provides a good discussion on the recharge areas. However, please clarify if there are any discharges from the coal seams within the permit boundary. (MK)

Response Muk 23

Within the permit boundary there are no discharges from the coal seams with the possible exception of the Carney coal on the far west side of the permit area. As shown on Exhibit D6.2-3, the Carney coal outcrops in the far western side of the permit area along the ridge tops but has been eroded away in the stream valleys. As a result, the Carney coal is perched with no real source of recharge and is generally dry. However, on the down dip side of the outcrop the coal may discharge within the permit if there is water in the coal seam to discharge. As shown on Figures MP-3-4.7-1 and MP-3-4.7-2 it was determined during the groundwater modeling efforts that most of the Carney coal within the far western side of the permit area was dry. Therefore, there is minimal (if any) discharge from the Carney coal within the permit area. Section D6.2.2.5 has been updated to clarify where discharges from coal seams may occur within the permit boundary.

Comment Muk 24

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 24. Please provide a range of estimates for recharge from precipitation to the aquifers within the permit boundary. Also, provide a discussion if this is the primary recharge mechanism for the aquifers within the permit boundary. (MK)

Response Muk 24

The estimated recharge rates from precipitation are summarized in Section 4.2.2 of Addendum MP-3. Addendum MP-3 describes recharge within the permit area in more detail than Section D6.2.2.5. A reference to MP-3 was added in Section D6.2.2.5.

Comment Muk 25

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 25. Consider providing a description of the soil properties within the permit boundary and the use of these percent soil distributions in the discussion of infiltration within the permit boundary. (MK)

Response Muk 25

The soil properties within the permit boundary are described in detail within Appendix D7. While different soil types are expected to have variable infiltration rates, the only infiltration rate that is significant for the coal aquifers is the infiltration rate assigned to the strata near the outcrop of the coal seams. Throughout the permit area the strata overlying the coal aquifer are generally dry. Therefore the primary source of recharge occurs at the outcrops. Scoria, in particular, plays a significant role in recharge of the coal seams because it usually occurs near the coal outcrop. Because of its highly permeable characteristics most of the precipitation that falls on the scoria infiltrates into the scoria where it either infiltrates into the coal or discharges along a seep line at the base of the scoria. As noted in the response to BJ Kristiansen's comment number 57, ash material between the base of the scoria and the coal seams sometimes limits how much of the water in the scoria actually comes into direct contact with the coal. Nevertheless, because a large percentage of precipitation falling on the scoria actually infiltrates into it, the scoria does provide a consistent water source for recharge into the coal outcrops. As noted in Addendum MP-3 Section 4.2.2 the scoria areas were delineated and assigned their own recharge zone because they do play a significant role in recharging the coal seams. Within the permit area, there are several locations where the coal seams outcrop as well. These outcrop areas were also assigned their own recharge zone because they also have a hydrologic connection to the coals. Since the strata overlying the coal seams to be mined in the Brook Mine are generally dry, the recharge component from the overburden to the coal is very low away from the outcrop areas. Because of the limited hydrologic interaction between

the recharge at the surface and the coal in areas away from the outcrop, site specific changes in the recharge rates based on soil type will not impact the coal aquifers. For this reason additional analysis of the infiltration properties of the soils within the permit area represents a level of detail that is not necessary to describe the hydrologic impacts to the coal aquifers from the proposed mining operations.

Comment Muk 26

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 26. Page D6-18 states, "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-8". Please revise this statement to reference the correct addendum - Addendum D6-9. (MK)

Response Muk 26

The text has been updated to read "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-9".

Comment Muk 27

Appendix D6, Section D6.2.3 Baseline Water Quality, 27. Page D6-20 states, "A piper diagram of the groundwater wells with measured values is presented in Figure D6.2-1. Please provide a discussion on the water quality types observed at each aquifer (Example: Is the water quality type variable within an aquifer? If yes, explain the potential reasons for this observed variability) based on the piper diagram. (MK)

Response Muk 27

Section D6.2.3 has been updated as requested.

Comment Muk 28

Appendix D6, Section D6.2.3 Baseline Water Quality, 28. Page D6-20 states, "The constituents that most frequently exceed the standard concentration limitations are ammonia, TDS, sulfate and manganese". Please clarify if these constituents exceed the Chapter 8 standards at *all* the monitor wells. (MK)

Response Muk 28

Please refer to the Tables D6.2-8 thru D6.2-17 for exceedances of water quality based on Chapter 8 standards. Based on the tables, the concentrations are not exceeded at all monitor wells. No text edits were made in response to this comment.

Comment Muk 29

Appendix D6, Section D6.2.4 Groundwater Rights, 29. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Cheyenne copy of the TFN does not have a sheet separator and a tab for Appendix E2 in the Adjudication volume. Please provide a sheet separator and tab for Appendix E2. (MK)

Response Muk 29

Refer to Comment DM3. Groundwater rights are provided in Appendix B of the Adjudication Volume. This text edit has been made in Section D6.2.4.

Comment Muk 30

Appendix D6, Section D6.2.4 Groundwater Rights, 30. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Please provide a summary discussion/statistics on (i) total number of water rights, (ii) number of wells, (iii) aquifer, (iv) permitted water use and other relevant summary statistics. (MK)

Response Muk 30

Groundwater rights are listed in Appendix B of the Adjudication Volume. All of the aforementioned information is listed for each water right. Due to the constantly changing nature of water rights, a summary table is difficult to construct, and due to summary statistics not being required by WDEQ regulation, a summary statistics table has not been prepared.

Comment Muk 31

Appendix D6, Section D6.2.4 Groundwater Rights, 31. Please provide a discussion (or reference) on the premine groundwater use (including the uses reported to SEO) within the permit boundary and the adjacent areas. (MK)

Response Muk 31

The premine groundwater uses as reported to the SEO within the permit boundary and the adjacent 3 miles are listed with each individual water right in Appendix B of the Adjudication Volume.

Appendix D7

Comment DS 6

Appendix D7, Exhibit D7.3.-1 was compared with Exhibit MP.1-1. As required, it appears that the soil sampling was concentrated in areas where surface disturbance is to be expected. Please provide the contour interval on the soils map. For ease of review and to prevent misinterpretation, however, the map showing sampling locations should also clearly show the locations of proposed surface disturbances instead of providing these details on separate maps which may or may not present differing scale distances.

Response DS 6

The disturbance boundary can be found on Figure D7.1-1 and as the reviewer noted on Exhibit MP.1-1. No revision to exhibit D7.3-1 has occurred in response to this comment.

Comment DS 7

Appendix D7, Page D7-4. The second paragraph of this page contains text that should be deleted. It states "If for whatever reason overall sampling intensity.....was determined to not be enough, it is proposed that any additional sampling be deferred and included a stipulation of a future pre-stripping soil assessment program." The Mine Plan and Reclamation Plan soils handling and replacement is contingent on adequate baseline sampling of the proposed area that will be affected by mining operations (topsoil balance and stockpile location planning and bond calculation). Therefore, baseline sampling for soils must be adequate prior to approval of any permit application. Please remove the inappropriate language from the Appendix D7 text. If future changes to the Mine Plan require additional soil sampling the issue will be addressed at that time.

Response DS 7

As requested, the second sentence of the second paragraph on page D7-4 has been deleted.

Comment DS 8

Appendix D7, Page D7-9. Text appears in this section that upon NRCS declaration of prime farmlands occurring in the permit area, a letter will be provided to the DEQ. A letter from the NRCS has been received and inserted in the permit declaring no prime farmlands to exist. The text, therefore, is not appropriate and should be removed.

Response DS 8

As requested, the sentence about prime farmland (the last sentence of the first full paragraph on page D7-9) has been deleted. A new reference, citing the letter received

on October 31, 2015 (negative determination of prime farmland on Ramaco permit area) has been inserted on page D7-9 and the new reference has been added to the list of references on page D7-33.

Comment DS 9

Appendix D7, WS § 35-11-415(b)(iii) and the Coal Rules, Chapter 4, Section (c)(ix) state that if topsoil is virtually nonexistent or is not capable of sustaining vegetation then subsoil or a selected spoil material may be used as a topsoil or subsoil supplement. Additionally, due to the proximity of this mine to the Tongue River, a Class 2AB stream, limits for chemical contaminants will be imposed on discharges from the permit. Therefore, for areas where unsuitable or marginal topsoil chemistry is located (e.g. Wibaux channery loam, sample R13), an alternative soil replacement material should be identified and used in reclamation. Such a commitment must also be provided in the Mine Plan and Reclamation Plan to provide evidence that such issues that could affect the condition of reclamation and/or lead to off-site impacts will be addressed.

Response DS 9

No "alternate soil replacement material" is necessary for areas of Wibaux channery loam (Map Unit Wx). The lower soil material below 8 inches of Wibaux (any "C" horizon soil substratum below 8 inches, where existent) was not recommended for salvage and would be grouped with the overburden spoil for placement purposes. This lower material had an excessive volume of hard coarse fragments (>35%) and, based on one of the three Wibaux sample sites (R13), an "unsuitable" EC and SAR value for the 8 to 15 inch depth, EC=12.8 and SAR=17.3. Two new sentences, indicating no soil salvage of Wibaux below 8 inches in depth, has been added to the soils report on page D7-26, one sentence each for Map Unit Wx and Map Unit Wx-RO. Furthermore, the amount of suitable soil available for salvage across the entire proposed disturbance area is not limiting, with a calculated weight-average of 20.2 inches. Therefore, additional "alternate soil replacement material" is not necessary.

Comment DS 10

Appendix D7, The description of Map Unit G (Bauxson Loam, sample R-19) does not show marginal selenium that occurs between 22 – 48 inch depth range which could affect the salvage depth and may require special handling of the marginally suitable subsoil.

Response DS 10

Two new sentences have been added to the last paragraph on page D7-21 stating the presence of "marginal" rated Selenium values for lower material of Bauxson loam (Map Unit G) sample site R19. Strictly speaking, "marginal" rated soil material is not

"unsuitable" and does not need to be specially handled. This lower Bauxson material has been recommended for salvage as "Subsoil", not "Topsoil'.

Appendix D8

Comment JJ 1

Appendix D8, 1. Please update the permit boundaries so that they are the same on Exhibit D8. 2-1 and Addendum D8 Map 1. I note specifically that lands should not be included within the permit boundary south of the interstate and that Section 10 TWN57N RNG85W displays different boundaries along the far west edge of the permit; it appears that the section lines are skewed between the two maps. The Addendum D8 Map 1 also is missing a sizeable amount of lands located in Section 21 TWN54N RNG84W which are included within the permit boundary of the Adjudication Exhibit 1 map. While comparing the maps I find that the maps display the same information in slightly different formats, please explain the necessity for two individual maps and at a minimum make them consistent against one another.

Response JJ 1

Baseline vegetation assessment maps have been updated to include the correct permit boundary. The discrepancy in the permit boundary is attributed to the difference in graphical representation between a USGS quad system and a PLSS system. The USGS quad system is now depicted. Exhibit D8.2-1 is a summary map for this Appendix and future updates made to this Appendix. This map will change throughout the life of the mine as future changes are incorporated. Addendum D8 Map 1 is for this Addendum and will not change throughout the life of the mine.

Comment JJ 2

Appendix D8, 2. Why does the study area not include all lands within the proposed permit boundary?

Response JJ 2

Portions of the proposed Brook Mine permit area not included within the study area were added during an October 2014 permit boundary change following completion of the baseline vegetation study. Additional studies were not conducted in these areas due to the limited size and similarity to areas within the study area. Section D8-1.1, page D8-1-5 text has been updated to explain the exclusion of these areas.

Comment JJ 3

Appendix D8, 3. The acreage displayed on Table D8.2-1 should equal that of the land permitted on the Form 11. The Form 11 displays 4,548.8 acres while the table shows 4,581.7 acres a difference of 32.9 acres. Please update either the Form 11 or Table

D8.2-1 to show the true permit acreage as it relates to the vegetation communities. Upon further review I find that Table D8-2 located on page Addendum D8-1-41 exhibits the proper acreages in relation to the Form 11, thus the values represented there may be more accurately displayed in Table D8.2-1.

Response JJ 3

Total acreage of the permit area is 4,548.8 acres as illustrated in Form 11 and Table D8-2. Table D8.2-1 has been updated to reflect the correct acreage.

Comment JJ 4

Appendix D8, 4. Table D8.2-1 states there are 56 acres of agricultural lands; however, I am unable to locate Agricultural lands north of the interstate. Please, discuss and edit the values to display true acreages in relation to the proposed permit boundary. (See comment 3 for more clarification and another table for utilization to update values.)

Response JJ 4

Agricultural Lands within the permit area total 4.5 acres and are located in Section 21 TWN54N RNG84W. Table D8.2-1 has been updated to reflect the correct acreage of Agricultural Lands and other vegetation communities within the permit boundary.

Comment SP 3

Appendix D-8 Vegetation Baseline, Page D8-3. Section D8.1.7. Guideline 2 is a non coal guideline. Please revise this sentence to reference the equation shown in Section D8-1.2.9 Sample Adequacy.

Response SP 3

Changed as requested. Additionally, Appendix D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8.1.1, page D8-1 and Section D8.3, page D8-4. Addendum D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8-1.2, page D8-1-5 and Section D8-1.9, page D8-1-38. Reference to Guideline 2 was removed from Section D8-1.2.9, page D8-1-12.

Comment SP 4

Appendix D-8 Vegetation Baseline, Page D8-4. Section D8.1.8. Please revise the second sentence to, "The EXREFA is all of the unaffected area for each native vegetation community."

Response SP 4

Changed as requested.

Comment SP 5

Appendix D-8 Vegetation Baseline, Page D8-1-8. Section D8-1.2.4. The last sentence in this section states that no sample locations occurred within the Brook Mine Permit Area. AG-13, 14, 17 and 25 are shown on Addendum: D8, Map 1 inside the permit area. Please correct this statement or the permit boundary on the Map.

Response SP 5

Baseline vegetation assessment maps have been updated to include correct permit boundary which illustrates AG-13, 14,17, and 25 are not located within the permit boundary.

Comment SP 6

Appendix D-8 Vegetation Baseline, Page D8-1-11. Section D8-1.2.8. The last sentence of the first paragraph should be revised to, "Sample adequacy was not required for species diversity and composition."

Response SP 6

Changed as requested.

Appendix D9

Comment DM 4

Appendix D9-Wildlife, Page D9-3 states that when a sage grouse confirmation letter is provided by WG&F, it will be provided to DEQ. It appears that the confirmation letter is already part of the package (Page D9-E3). Please reference the location of the letter.

Response DM 4

Page D9-3 was revised to reference Page D9-E3 as the location of the letter.

Comment WGF 1

(Appendix D9) , We recommend this report become part of the annual reporting which will ensue throughout the operation of the mine.

Response WGF 1

Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the sections of the Mine Plan where the annual wildlife report commitments are contained.

Comment WGF 2

(Appendix D9), We suggest coordinating with the USFWS regarding raptor mitigation as needed through the mining process.

Response WGF 2

The commitments to coordinate with the USFWS regarding raptors as well as T&E and other species of federal concern are provided in Section MP.18, Addendum MP-8 and Addendum MP-9 of the Mine Plan. Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references these discussions.

Comment WGF 3

(Appendix D9), We recommend mining reclamation practices consider providing suitable habitat for existing wildlife within the specifications required by DEQ-LQD.

Response WGF 3

The commitments to reclaim wildlife habitats are provided in the Reclamation Plan in Section RP.7 Wildlife Restoration. Discussion was added at the end of Addendum D9 - 1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the Reclamation Plan.

Appendix D10

Comment BJ 63

EXHIBITS, Addendum D10, The permit boundary layer on all of the exhibits covering the aquatic resource boundaries is incorrect. Please correct the permit boundary layers.

Response BJ 63

Aquatic resource inventory maps have been updated to include the correct permit boundary.

Comment DM 5

Appendix D10-Wetlands, D10-1.4 – Please include a copy of the letter requesting concurrence and jurisdictional determination sent to the ACOE At the end of the text, and reference the letter in the text.

Response DM 5

BKS Environmental Associates, Inc., on behalf of RAMACO, requested concurrence and jurisdictional determination from the USACE on May 29, 2015. A copy of the

letter sent to the USACE has been included as Attachment D10-F. Section D10-4, page D10-10 text has been updated to reflect submittal of USACE request.

Comment MK 45

Appendix D10-Wetlands, Section D10.2 Results, 19. The text may want to state when (what date) RAMACO requested the jurisdictional determination from the USACE, and include this request letter as an Addendum to Appendix D10. This would provide documentation that the request was submitted, as receipt of the USACE determination may lag behind the LQD permitting process. (MDK)

Response MK 45

See response to DM5.

Appendix D11

Comment BJ 26

Appendix D11, Alluvial Valley Floor, Section D11.1, RAMACO has requested LQD to make a determination on the nature of the drainages as potential AVF within the permit boundary as well as within ½ mile of the permit boundary. This would then entail analysis of the following drainages (distances are approximations): • Hidden water Creek – all (4 mi.)

• East Fork Earley Creek – lower 1 mile

• Slater Creek – lower 3 miles

• Tongue River – ½ mi. east of Interstate 90 and 4 mi. west of Interstate 90 at the Acme exit.

Prior to such a declaration, LQD staff will have to perform a variety of assessments designed to assist us in making a declarative statement about AVF classification. An AVF declaration will be made after in-depth study of the drainages. Such investigation will consist of, but not be limited to:

1. Field evaluation of the geomorphic and lithologic character of the drainages in question;

2. Determination of the agricultural characteristics of the stream course;

3. Examination of available bore hole logs that can be used to characterize the subsurface materials beneath the valley floor;

4. Determination of groundwater and surface water characteristics, both quantitative and qualitative, within the drainages in question;

5. Other evaluation processes that may be deemed necessary should initial findings warrant further, in-depth analyses.

Response BJ 26

Revised D11 text throughout to expand discussion on the drainages mentioned above. Incorporated previous AVF studies into Appendix D11. Information satisfying each statement can be found in the following locations as well as many other locations throughout the document:

1. Borehole logs provided in Addendum D11-3. Hidden Water Creek test pits dug by Big Horn Mine and discussed in Section D11.3 "Stream Laid Deposits."
2. Agricultural characteristics of the stream courses are discussed in Sections D11.4.2, D11.4.3, and D11.5, in particular.
3. Bore hole logs are provided in Addendum D11-3. Additional test pit and borehole information was analyzed from the Big Horn Mine Permit No. 213.
4. Groundwater and surface water characteristics are discussed extensively in Appendix D6. Potential impacts to surface water and groundwater are discussed in the Mine Plan. The water resources are generally discussed in Section D11.4.
5. Additional research has been incorporated from the Big Horn Mine Permit No. 213. Corrections and reevaluations of the AVF study have been made throughout Appendix D11.

Comment BJ 27

Appendix D11, Alluvial Valley Floor, Addendum D11-3, Some of the borehole and well logs indicate a damp or wet interval encountered during drilling. Was an attempt made to allow wet materials to produce water prior to continuation of the hole or was water noted after adding another drill steel and lowering the kelly to begin the next 20 feet of hole? Typically, after the steel has been added and the compressor is engaged, a small amount of water can be air-lifted before the rotary table begins to turn. If so, are there field notes indicating water was observed during the connection?

Response BJ 27

It is standard procedure during drilling operations to provide wet or damp intervals an opportunity to produce water. If the intervals had produced water, this would have been noted in the drilling logs provided in Addendum D11-3. There are no other separate field notes that would provide additional information. No changes to the text were made.

COMMENT MK 1

Appendix D11-AVF, Section D11.1 Introduction, 1. In the second paragraph on Page D11-1, the possible impacts of the proposed mining operation on the Tongue River

AVF are dismissed because the area is planned for facilities level disturbance only. However, the groundwater model (Mine Plan Addendum MP-3) predicts drawdown in the Tongue River alluvium, thereby possibly affecting the AVF. As discussed in subsequent comments, additional analysis and monitoring is needed to comply with LQD Coal Rules and Regulations regarding AVFs. (MDK)

RESPONSE MK 1

Revised text to reference Mine Plan Section MP.6 concerning the Brook Mine's effect on the Tongue River AVF.

COMMENT MK 2

Appendix D11-AVF, Section D11.2 Purpose and Scope, 2. On Page D11-2, please change "Wyoming Reclamation Act" to "Wyoming Environmental Quality Act". (MDK)

RESPONSE MK 2

Revised text to state "Wyoming Environmental Quality Act."

COMMENT MK 3

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 3. For identification of unconsolidated stream laid deposits, LQD Guideline No. 9 (AVF) lists two items that may be used to positively identify unconsolidated streamlaid deposits: (1) channel bars, splays, abandoned meanders, modern flood plains, or terraces, and (2) bedload or washload sediment deposited or transported in a nonbedrock channel bottom. Presumably, item (2) would be met at the streams identified within the AVF study area. However, the permit application does not address whether the channels contain geomorphic features from item (1). Please address in the text whether channel bars, splays, abandoned meanders, modern flood plains, or terraces are observed within the streams within the AVF study area. (MDK)

RESPONSE MK 3

Revised text to discuss the lack of channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs in the Hidden Water Creek, Slater Creek, East Fork Earley Creek, and Earley Creek valleys.

COMMENT MK 4

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 4. On Page D11-5, the conclusion that the materials in Hidden Water Creek valley do not meet the definition of unconsolidated streamlaid deposits, is in conflict with the conclusion from the Big Horn Mine Permit. The Big Horn Mine Permit (Appendix D6, Pages D6-151 to D6-158) describes the evaluation of unconsolidated streamlaid deposits on lower Hidden Water Creek. The permit states: "The conclusion verified from the pit observations is that

these deposits are unconsolidated and stream laid. Small isolated patches of colluvium or bedrock can be found throughout the alluvial deposits, but these characteristics do not exclude the deposit from being stream laid." Please evaluate the data and findings from the Big Horn Mine Permit before a conclusion is drawn about the absence of unconsolidated streamlaid deposits on Hidden Water Creek. (MDK)

RESPONSE MK 4

Revised text to discuss the findings of the Big Horn Mine from test pits in the Hidden Water Creek valley. Additionally, Exhibit D11.3-1 was revised to show the locations of the Big Horn Mine test pits in Hidden Water Creek in relation to both the Brook Mine permit area and the Big Horn Mine permit area. Added the Big Horn Mine Permit State Decision Document (SDD) 213-T2 to Addendum D11-2.

COMMENT MK 5

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 5. The Big Horn Mine Permit also describes subirrigation and flood irrigation studies on lower Hidden Water Creek and concludes: "Due to the lack of subirrigation and extremely low potential for flood irrigation, Hidden Water Creek is not an alluvial valley floor." Although this is in the approved mine permit, it does not appear that an explicit AVF determination for Hidden Water Creek was ever issued by the LQD, and the AVF findings in the SDDs for the Big Horn Mine Permit do not mention Hidden Water Creek. The Brook Mine Permit application should incorporate these previous AVF studies on Hidden Water Creek into Appendix D11. (MDK)

RESPONSE MK 5

See response to comment MK 4. Additionally, while the Big Horn Mine State Decision Documents do not mention Hidden Water Creek, the SDD 213-T2 states that "No other drainages are of significant size or lack the stream laid deposits necessary to be an Alluvial Valley floor within the renewal and/or amendment areas." Hidden Water Creek is located within the renewal area and was not included within the originally declared AVF area. Although it was not mentioned by name, it has been declared not to be an AVF within the Big Horn Permit Area.This SDD has been added to Addendum D11-2 and discussion added to the text in Section D11.3.

COMMENT MK 6

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 6. On Page D11-6 it is stated the three monitor wells were installed along the thalweg of Slater Creek. The transects in Exhibit D11.3-2 show that two of the wells (578513-AL and 578418-AL) are not along the thalweg but are rather upgradient of the channel. Please revise this description in the text. (MDK)

RESPONSE MK 6

Revised text to more accurately state that the monitor wells are along or near the thalweg.

COMMENT MK 7

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 7. It appears that from Exhibit D11.1-1 that subirrigation is occurring on Earley Creek within the AVF study area. Please explain why subirrigation was not mapped on Earley Creek. (MDK)

RESPONSE MK 7

Revised Exhibit D11.1-1 to show potentially subirrigated lands on Earley Creek. The text was revised in Section D11.4.2 to reflect that subirrigation potentially occurs along Earley Creek.

COMMENT MK 8

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 8. On Page D11-6, second paragraph, the alluvial/colluvial potentiometric surface is dismissed as a source of subirrigation along Slater Creek. However, the other hydrologic processes responsible for the subirrigation are not identified. Please discuss in the text why subirrigation is occurring along Slater Creek. (MDK)

RESPONSE MK 8

Revised text to discuss the presence of burn areas overlying residual coal ash bands that serve as aquacludes which prevent water from entering or escaping the coal below.

COMMENT MK 9

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 9. The cross-sections in Exhibit D11-3-2 would be improved if the active channel and any floodplains or terraces were shown. A description of the materials in the active channel bottom would also help identify unconsolidated streamlaid deposits. (MDK)

RESPONSE MK 9

Revised Exhibit D11.3-2 to show the 2-year, 24-hour flood inundation area and the location of the active channel. Data regarding the materials in the active channel bottom are presented in the borehole logs in Addendum D11-3.

COMMENT MK 10

Exhibit D11.4-1, the extent of irrigated lands shown in Sections 2 and 11 along Slater Creek may not be correct. According to the summary for the Hart Brothers Ditches

water right (permit 1317) in the SEO database, the land being irrigated under the water right has decreased to 23 acres:

> THIS FACILITY IS MADE UP OF TWO DITCHES. THE WEST DITCH HAVING A POINT OF DIVERSION IN LOT 2 AND THE EAST DITCH HAVING A POINT OF DIVERSION IN THE SENE OF SECTION 3, T57N, R85W. T57N, AND 58N, R85W HAS BEEN DEPENDENTLY RESURVEYED. REQUEST FROM PADLOCK RANCH TO ELIMINATE 67 ACRES AS FOLLOWS: 32 ACRES IN THE SWSW OF SECTION 2 - 30 ACRES IN THE NENW AND 5 ACRES IN THE NWNW OF SECTION 11 ALL IN T57N, R85W, RECEIVED AND GRANTED. REQUEST OF ELIMINATION AND PROOF OF OWNERSHIP FILED IN MISCELLANEOUS NOTICES. ADJUDICATED WITH H.H. WILLIAMS AS APPROPRIATOR. PERMIT RECORD REFLECTS SOURCE AS SLATER CREEK AND WATER STORED IN THE HART BROTHERS RESERVOIR, P60R, XR7825A, HOWEVER CERTIFICATE RECORD REFLECTS .91 CFS FOR THE IRRIGATION OF 64 ACRES. BOC PETITION II 89-4-2 BY PADLOCK RANCH WAS GRANTED TO ISSUE AMENDED CERTIFICATE C77/290A TO REDESCRIBE LANDS WITHOUT CHANGING LAND TOTALS AND TO CHANGE POINT OF DIVERSION FROM THE RECORD POINT IN THE NWNE AND SENE OF SECTION 3, 57N, R85W AND PARTIAL MEANS OF CONVEYANCE FOR 41 ACRES (.59 CFS) TO THE WILLIAMS DITCH, P8710D, C77/289A DIVERTING WATER FROM SLATER CREEK IN THE SESW OF SECTION 34, T58N, R85W AS RECORDED IN ORDER RECORD BOOK 36, PAGES 385-390 AND RECEIVED ON CD3/578A. THIS LEAVES 23 ACRES STILL IRRIGATED UNDER THIS PERMIT. LANDS SHOWN BELOW AS "AME" AND "ELI" ARE THOSE ORIGINALLY DESCRIBED UNDER THIS DITCH.

Please clarify the irrigated acreage status for the Hart Brothers Ditches water right with the SEO and revise Exhibit D11.4-1 accordingly. (MDK)

RESPONSE MK 10

Exhibit D11.4-1 was revised to more accurately capture irrigated lands on Slater Creek in Sections 2 and 11 of Township 57 North, Range 85 West.

COMMENT MK 11

Appendix D11-AVF, Section D11.4.4 Water Quality, 11. On Page D11-7, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

RESPONSE MK 11

Removed text referencing State of Montana water quality standards.

COMMENT MK 12

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 12. On Page D11-8, second paragraph, it states that Exhibit D11.1-1 shows that sufficient water supply does not exist for consistent agricultural practices in East Fork Earley Creek. However, Exhibit D11.4.1 shows a point of diversion for Earley Creek Ditch No. 1 and several areas of irrigated lands less than 40 acres in East Fork Earley Creek. As documented in Addendum D11-4, there is an adjudicated water right for irrigation in this location. So there may be sufficient water supply for consistent agricultural practices. The text needs to further expand on this discussion of East Fork Earley Creek since there is an adjudicated water right for irrigation. (MDK)

RESPONSE MK 12

Revised text to include the Earley Creek Ditch No. 1 water right, but explained that subirrigation must not be prevalent in East Fork Earley Creek because no culvert or other conveyance structure is present beneath I-90. If subirrigation was prevalent and without a conveyance structure beneath I-90, substantial amounts of water would back up against the interstate.

COMMENT MK 13

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 13. On Page D11-8, last paragraph, it states that the hay meadows along Slater Creek in Sections 2 and 11 are not within the boundaries of subirrigation or natural flood irrigation.

> (a) The areas symbolized as irrigated lands in Exhibit D11.4-1 do not necessarily correspond to hay meadows, as the imagery shows hay meadows in the SWNE, SENE, and NESE of Section 11, and the NWSW of Section 12. The hay meadows appear to correspond with the area mapped as "AG" in the Vegetation Map (Exhibit D8.2-1) in Addendum D8.
>
> (b) The irrigated area shown in Exhibit D11.4-1 near the Landen Ditch does overlap with subirrigation mapped in Exhibit D11.1-1.

Please re-evaluate the area of hay meadows along Slater Creek and revise the text accordingly. Comments No. 15 and 16 below also relate to this issue. (MDK)

RESPONSE MK 13

The text was revised in Section D11.5 to reflect the presence of limited hay meadows and overlapping of irrigation with subirrigation on the upper reaches of Slater Creek in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West. Exhibit D11.4-1 was revised to show irrigation in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West.

COMMENT MK 14

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, On Page D11-8, last paragraph, it states that, besides Hart Bros Ditches, the remaining portion of the Slater Creek valley does not contain SEO water rights. This is not the case as Exhibit D11.4-1 shows Landen Ditch in the NENW of Section 11. This water right (P11695) does not appear in Addendum D11-4. Please revise the text and add this water right to Addendum D11-4. (MDK)

RESPONSE MK 14

The text was revised in Section D11.5 to discuss the Landen Ditch water right (P11695). A copy of the Landen Ditch water right was added to Addendum D11-4.

COMMENT MK 15

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 15. The irrigated acreage for the Landen Ditch water right appears to be 18 acres for one point of use and 22 acres for a second point of use. Please add these areas to Exhibit D11.4-1. (MDK)

RESPONSE MK 15

Exhibit D11.4-1 was revised to more accurately reflect irrigated lands in the vicinity of the Landen Ditch.

COMMENT MK 16

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 16. The Hall Ditch (SEO Permit 5195), mapped in Section 11 of Exhibit D11.4.1, apparently provides irrigation water for hayfields in the NESE of Section 11 (30 acres) and the NWSW of Section 12 (22 acres). This water right does not appear in Addendum D11-4. Please add this water right to the Addendum and add the irrigated acreages to Exhibit D11.4-1. (MDK)

RESPONSE MK 16

A copy of the Hall Ditch water right (SEO Permit 5195) was added to Addendum D11-4. Exhibit D11.4-1 was revised to depict irrigated lands in Section 12, Township 57 North, Range 85 West. The text in Section D11.5 was revised to discuss the Hall Ditch water right.

COMMENT MK 17

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 17. Portions of Earley Creek and East Fork Earley Creek are within the AVF study area yet the permit application does not attempt to conclude if these streams contain AVFs. Presumably, the LQD will need to make an AVF finding on these streams. (MDK)

RESPONSE MK 17

See response to Comment BJ 26. Additional discussion has been added to aid WDEQ in the AVF findings of East Fork Earley Creek and Earley Creek. Both valleys are upstream of mining activities proposed by RAMACO such that no material damages are expected to either valley.

COMMENT MK 18

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 18. The first bullet for Slater Creek on Page D11-9 dismisses the positive identification of unconsolidated stream laid deposits because a layer of colluvial material was found over alluvial material. However, as stated in Appendix D5 on Page D5-8 and Page D5-9, sub-rounding of the clinker present in the cuttings suggests water driven deposition of limited extent. Also, as discussed in Comment No. 3, the application did not evaluate unconsolidated streamlaid deposits in a manner that is consistent with identification criteria listed in LQD Guideline No. 9. The application has not provided sufficient evidence that unconsolidated stream laid deposits are not present along Slater Creek. (MDK)

RESPONSE MK 18

See response to Comment MK 3. The discussion on the Slater Creek valley has been further expanded to include the absence of unconsolidated stream laid deposits such as channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs. Exhibit D11.3-1 clearly indicates the presence of undifferentiated alluvium and colluvium (Qac) in the Slater Creek valley.

COMMENT MK 19

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 19. The third bullet on Page D11-9 for Slater Creek should be clarified that the width of natural flood irrigation in the valley is generally insufficient to provide for economic agricultural practices. However, economic agricultural practices clearly occur immediately upstream of the proposed mine permit boundary because of artificial flood irrigation of hayfields adjacent to the channel. These practices are documented by existing water rights that are approximately 100 years old. Please revise this discussion. (MDK)

RESPONSE MK 19

The text in Section D11.6 of Slater Creek's third bullet was revised to include the irrigated hayfield upstream of the permit boundary.

COMMENT MK 20

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 20. The fifth bullet for Hidden Water Creek on Page D11-9 seems to dismiss the positive identification of

unconsolidated stream laid deposits because of colluvial material with shallow bedrock. However, as previously noted, this conflict with information in the Big Horn Mine permit concerning unconsolidated stream laid deposits on Hidden Water Creek. (MDK)

RESPONSE MK 20

Refer to response of Comment MK 4. The Big Horn Mine permit boundary has been added to Exhibit D11.1-1. The text in Section D11.6 has been updated to include a summary of the discussion stating that the Big Horn Coal Permit No. 213-T2 SDD determined the limits of the AVF, and no portion of Hidden Water Creek was determined as being AVF.

COMMENT MK 21

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, Although the LQD has not yet issued its formal finding, the segment of the Tongue River adjacent to the proposed permit area, which was not declared under previous LQD findings, likely contains an AVF.

> (a) If this AVF is significant to farming, the applicant must comply with LQD Coal Rules and Regulations Chapter 3, Section 2(d)(ii) and demonstrate that the proposed mining operations will not materially damage the quantity and quality of water that supplies the Tongue River AVF. The absence of direct mining on the Tongue River AVF does not relieve the requirement of assessing the probable hydrologic impacts of the proposed operation to the AVF, particularly since the groundwater model in Mine Plan Addendum MP-3 predicts drawdown in the Tongue River alluvium. (MDK)
>
> (b) Regardless of the significance to farming, the applicant must also maintain and/or restore the essential hydrologic functions of the Tongue River AVF. The applicant must therefore identify the essential hydrologic functions of the Tongue River AVF and either (1) provide an analysis that the proposed operation will not hamper the essential hydrologic functions, or (2) demonstrate that the essential hydrologic functions will be restored. The essential hydrologic functions for another part of the Tongue River AVF are described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27), so this may be a good starting point to consider. (MDK)
>
> (c) A monitoring system is also required to demonstrate the essential hydrologic functions are maintained, as per LQD Coal Rules and Regulations, Chapter 5, Section 3(b)(ii). Since the groundwater model (Mine Plan Addendum MP-3) predicts 2.5 feet of drawdown in the Tongue River alluvium, the monitoring

system may likely contain alluvial monitoring wells and periodic evaluation of color-infrared imagery. (MDK)

RESPONSE MK 21

Revised text as requested. Revised text by adding information regarding the essential hydrologic functions of the declared AVFs (Tongue River and Goose Creek) from the SDD in Addendum D11-2. Also, added portion of text to describe possible monitoring system and plan for the AVFs that may be affected.

COMMENT MK 22

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, 22. The essential hydrologic functions of the adjacent Goose Creek AVF must also be maintained during the proposed mining operation. The application needs to list these functions, as described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27). A monitoring system is also required to demonstrate that the essential hydrologic functions will be maintained. (MDK).

RESPONSE MK 22

See response to comment MK 21.

Mine Plan

Comment BJ 28

Volume 11, Mine Plan, Section MP.1.2.1, pg. MP-4, Tunnel and pillar widths are discussed in general terms. Please approximate a range for the widths, in feet, in the narrative to give context to the discussion.

Response BJ 28

Added text as suggested.

Comment BJ 29

Volume 11, Mine Plan, The fifth sentence, beginning with "To minimize the amount of exposure..." does not make sense. Please rewrite the sentence for clarity.

Response BJ 29

Added text as suggested.

Comment BJ 30

Volume 11, Mine Plan, The narrative also references figure MP.1-3 as a general schematic of the highwall mining operation. The figure depicts significant vertical

highwalls above the mining operation. The text mentions that the highwalls will be vertical where the Masters and Carney converge but the illustration depicts conditions where the coal seams appear to be separated by a considerable thickness of parting. It is our experience that vertical highwalls in the Powder River Basin are unstable and should be discourage wherever possible. What would the maximum thickness of burden approximate where the vertical highwalls will exist? Please include an average on the schematic as has been done for pit width and bench width.

Response BJ 30

The figure has been updated to include the average depths.

Comment BJ 31

Volume 11, Mine Plan, Pages MP-3 and MP-4, These pages describe the highwall mining operation in vague generalities. The narrative states that the continuous miner will advance into the working face to a depth of 2,000 feet. The manufacturer's specifications for the ADDCAR system state that the depth of a cut is 1,600 feet. Is this a discrepancy of 400 feet or is there a difference in mining tools and the ADDCAR system comes with multiple depth capacities. Please clarify.

Response BJ 31

Conversations with ADDCAR representatives indicates that they will be able to extend the range of the highwall mining system so cuts up to 2,000 feet can be achieved.

Comment BJ 32

Volume 11, Mine Plan, A general word of guidance – Ramps are mentioned in the narrative as designed to an 8% grade. The Cat 777 can generally handle this grade fairly well under most conditions. The Mack Titan trucks, however, may be problematic under certain conditions. Entering the pit on the ramp could be difficult for the Mack trucks with pups if the ramp has been watered to control dust. The overburden materials used for ramp systems are generally silty with a clay matrix and overwatering can create slipping hazards for vehicles. A truck with multiple trailers will have difficulty navigating these conditions. A 6% ramp under these situations is strongly advised.

Response BJ 32

Revised text as suggested.

Comment BJ 33

Volume 11, Mine Plan, The narrative describes the tunnel width as variable, depending on the cutting head chosen. Please indicate approximate footages of the tunnel widths. For example, Bucyrus and Joy manufacture continuous miners that

have heads ranging from 11 to 12 feet in width. A mention of those widths would clarify the narrative. Also the protective coal pillars are described but have no dimensions indicated. The pillar width to tunnel width is crucial so an approximation of the remnant pillars width in feet is required. Please include approximate widths for tunnel and pillar widths.

Response BJ 33

See response to Comment BJ 28. The text has been updated as requested.

Comment BJ 34

Volume 11, Mine Plan, Section MP.1.2.2, The dozer push method of overburden removal is not adequately described. Though Figure MP.1-4 does depict the dozer push materials to some extent, the overlapping nature of the multiple lift system can be confusing to some. The narrative on page MP-4 is too brief. Please elaborate further on the dozer push staging and overburden removal. Perhaps an illustration that depicts the dozer removal in stages would be more appropriate. This can be accomplished by creating a series of illustrations rather than only one. Please clarify the methodology.

Response BJ 34

Revised text as requested. Created Figure MP.1-5.

Comment BJ 35

Volume 11, Mine Plan, Section MP.1.4, Pg. MP-5, The last sentence does not make sense. Please rewrite the sentence.

Response BJ 35

Removed last sentence for clarity.

Comment BJ 36

Volume 11, Mine Plan, Section MP.4.2.3, Pg. MP-15, The discussion of temporary topsoil stockpiles describes creating a ring ditch around the topsoil pile if there is a potential for water erosion during the 2 week to 6 month life of the pile. Since the climate is unpredictable and subject to rapid changes, temporary topsoil stockpiles (2 weeks to 6 months) will be required to have ring ditches in all cases with no qualifiers. LQD writes more violations concerning inadequate topsoil practices than any other issue. Rewrite the narrative to indicate that all temporary topsoil stockpiles will have a ring-ditch and berm created for piles having a life of 2 weeks or more. Keep in mind that even a short-lived topsoil stockpile could generate a violation if a sudden rainstorm were to erode the soil and waste it on the surrounding terrain. RAMACO may want to allow for this as well

Response BJ 36

Updated text as requested.

Comment BJ 37

Volume 11, Mine Plan, Section MP.4.3.4, Pg. Mp-17, A swell factor of 16% is being used to convert bank cubic yards to loose cubic yards. The number was generated from information attained from Big Horn Coal (PT213). Where was this information located? Many of the coal mines in the northwestern corner of the Powder River Basin use a swell factor of 13% - 14% since the overburden material is finer grained, with a higher clay content than mines on the eastern margin of the basin. Please cite the use of a 16% swell factor.

Response BJ 37

Revised text as requested. Table MP.4-9 provides typical swell and load factors of materials.

Comment BJ 38

Volume 11, Mine Plan, Section MP.6.1, Pg. MP-39, The second paragraph discusses surface runoff attenuation during mine years 4 and 5. The peak flow rates for precipitation events will be attenuated by the mining trenches that lie perpendicular to the flow in the local drainages. What flow events are expected to be attenuated by the trenches? Will the 2 year, 10 year, or 100 year events be considered as an average event? Please modify the narrative, in general terms, to define which precipitation event will be used when designing the pit drainage plans.

Response BJ 38

Updated text as requested.

Comment BJ 39

Volume 11, Mine Plan, Section MP.8, Pg. MP-47, The narrative mentions that potable water will be hauled to the mine an placed in a cistern. Why is a cistern system being considered for potable water instead of a reverse osmosis unit? The local residents use such systems as do the mines. How large of a cistern will be used for water storage? Please modify the narrative to expand on the rational behind using a cistern.

Response BJ 39

The text has been revised. The final potable water system has not been determined.

Comment BJ 40

Volume 11, Mine Plan, Section MP.9.9, Pg. MP-52, When pre-dug mud pits are to be used for exploration drilling, the topsoil must be protected from contamination by removal and stockpiling. The pit location must be stripped to the base of the soil with an areal extent that allows the pit materials to be stacked as spoil without encroaching on native surface. Reclamation shall occur in a manner that will best restore the surface to its pre-disturbance condition. These contingencies need to be better described in the narrative. Please modify the text to reflect the aforementioned conditions.

Response BJ 40

Revised text as suggested.

Comment BJ 41

Volume 11, Mine Plan, Section MP.18, Pg. MP-68, The second paragraph discusses the speed limits that will be set on haulroads to protect wildlife. Approximately what speed limits will be used?

Response BJ 41

Updated text with a 45 MPH Speed Limit.

Comment BJ 42

Volume 11, Mine Plan, Section MP.20, Pg. MP-69, The brief description of underground mining should state that no "conventional" underground mining will occur. Highwall coal recovery is an underground mining technique, but no personnel work underground. Thus the mining is modified underground mining.

Response BJ 42

Revised text as requested.

Comment BJ 43

Volume 11, Mine Plan, Section MP.24, Pg. MP-70, The word "Operation" is misspelled in the title (OPERTATION).

Response BJ 43

Revised text as requested.

Comment BJ 44

Volume 11, Mine Plan, Section MP.25, Pg. MP-71, The second paragraph, third sentence, discusses requiring additional permitting. The word "additional" is misspelled (addidtional).

Response BJ 44

Revised text as requested.

Comment BJ 45

Volume 11, Mine Plan, TABLE MP.1-1, The total disturbance should read 895 acres, not 775. Please correct the table.

Response BJ 45

Revised text as requested.

Comment BJ 46

Volume 11, Mine Plan, FIGURE MP.1-3, The average width of the pit floor and safety bench have average widths indicated on the drawing. Please insert the average heights of the vertical highwalls in these situations.

Response BJ 46

Revised Figure MP.1-3 requested.

Comment BJ 47

Volume 11, Mine Plan, FIGURE MP.1-4, The cross section, as drawn, is confusing. It would appear that dozer pushed, loose material significantly exceeds the bank material available in the highwall. The figure is not drawn to scale but a more accurate attempt to represent dirt volumes would be appreciated. Also, the cross section itself does not make sense in the way that operational steps are illustrated. A series of cross sections over time would be much more beneficial to define the appearance of the dozer push. Please modify the figure accordingly. A sample of an idealized schematic is attached. It is volumetrically accurate.

Response BJ 47

Figure MP.1-4 has been updated to add clarity.

Comment BJ 48

Volume 11, Mine Plan, FIGURE MP.4-3, Pg. MP-F7, What is the narrow, vertical rectangle located in the center of the coal stockpile coming from the stacker?

Response BJ 48

The figure MP.4-3 has been updated to remove the rectangle

Comment BJ 49

Volume 11, Mine Plan, Addendum MP-3, Pg. MP-3-2, The introductory paragraph states that the Brook Mine is approximately 6 miles northwest of Sheridan, Wyoming. However, in earlier narrative, the mine is said to be 6 miles south of the Montana border and 8 miles northwest of Sheridan. This passage is found in the Land Use Appendix D1-1. The distances should be uniform in all instances throughout the narrative.

Response BJ 49

Revised text as requested.

Comment BJ 50

Volume 11, Mine Plan, Addendum MP-3, Section 2.3, Figures 2.3-1 and 2.3-2 show the potentiometric surfaces for the Carney and Masters coal beds. The contours daylight and appear to be in mid-air over the Slater Creek drainage. Please adjust the contours so they terminate at the outcrop.

Response BJ 50

Revised Figures 2.3-1 and 2.3-2 in Addendum MP-3-17 as requested.

Comment BJ 51

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-3, The second to last paragraph indicates that the depth of the penetration by the continuous miner will be 2,000 feet. Is this an approximation since the listed depth for the ADDCAR device is 1,600 feet. Please clarify the discrepancy.

Response BJ 51

Based on communication with ADDCAR's representative 2,000 ft penetration is achievable. Generally, users of the ADDCAR system encounter increasing depth of cover with greater penetrations requiring wider web pillar between holes. The loss in recovery due to the wider pillars potentially negates any production gain from increased penetration.

Comment BJ 52

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-4, The discussion in this sections centers around the necessity of maintaining a straight, even cutting depth to prevent pillars from being cut too narrow to hold up the roof material and

allow subsidence. The 1:1 ratio suggested by NIOSH is acceptable as long as roof strength tests bear up (no pun intended) the use of the general guidelines. A small sample of tests have been run on roof and coal rock intervals and those tests have been reported. LQD requests a narrative placed either in this location of the text or other location of RAMACO's choosing that discusses the strength tests results as it pertains to roof stability. Also, a commitment must be made in the document to sample roof material for strength testing for at least one location in every panel that will mined by the continuous miner prior to mining. Our concern rests with the competence of the overlying lithologies and their possibility for subsidence. This has been a problem in this area for decades and care must applied to characterize roof materials accurately.

A sampling plan to test compressive strength above each coal panel must be submitted prior to permit approval.

Response BJ 52

RAMACO must submit and have an approved MSHA Ground Control Plan that contains the strength test and commitments requested. RAMACO will provide this information when it is received and include it in the Subsidence Control Plan.

Comment BJ 53

Volume 11, Mine Plan, Addendum MP-6, Please provide the data used as input for the ARMPS-HWM program.

Response BJ 53

The following input values were used in the ARMPS-HWM programp: compressive strength of coal - 660 psi, rock density - 162 lbs/ft3, abutment angle of 21°

Comment BJ 54

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-2, The scale of the photograph is too large to adequately depict the zones of surface subsidence from the old underground mines. Please blowup the scale to allow for clear visibility of the subsidence.

Response BJ 54

Cardno selected the larger scale to show that subsidence was limited to a small portion of the deep mine and not visible over other areas of the deep mine due its increased depth of cover. See revised figure in revision to Cardno's Subsidence Report

Comment BJ 55

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-3, This figure is very effective. It clearly shows the subsidence evident on the air photo as it correlates to

the old underground map superimposed on it. One problem, though, is that the air photo base needs to be darker, with greater contrast. The photo is a bit washed out and manipulation of the brightness/contrast aspects of the photo would help its visibility greatly. Please recalibrate the photo tonality.

Response BJ 55

See revised figure in revision to Cardno's Subsidence Report

Comment BJ 56

Volume 11, Mine Plan, Addendum MP-8, Section MP-8.5.4, The last sentence in this section indicates that there is no suitable habitat available for the Northern Long-Eared Bat. Does this include the climax Cottonwood Forest along Tongue River? The well developed understory along the river is suitable for Long-eared bat habitation though none have been located in this area. Or does the negation of the existence of the bat only apply to the area in the hills above the river where the mining will occur. Please clarify the area that was considered for potential Long-Eared Bat occurrence.

Response BJ 56

The text was revised to clarify.

Comment BJ 64

EXHIBITS, Mine Plan, Exhibit MP.1-1, The patterns used to depict surface disturbance from year to year are too similar. It is difficult to differentiate between year 0 and year 2, for example. Please recreate the surface disturbance layers to be more unique. The overburden removal sequence map (Exhibit MP.4-4) is a good example.

Response BJ 64

Revised Exhibit MP.1-1 as requested.

Comment DM 6

Mine Plan, MP.3.1.3 – A primary haul road appears to cross the Tongue River using the bridge that is currently in place from previous mine usage. Please discuss any updates needed for that bridge to be adequate for the intended usage.

Response DM 6

The revised primary haul road alignments do not cross this bridge and the use of this bridge for haul trucks and other traffic associated with the mine is not planned. Updated Exhibit MP.3-1.

Comment DM 7

Mine Plan, Exhibit MP4-3 shows Overburden Stockpiles OB-12 and OB-13, and Topsoil Stockpile TS-6 being located directly in the Slater Creek channel, without any mention of redirecting slater creek, or otherwise preventing the hydrologic consequences of damming up the creek with Overburden and Topsoil stockpiles. Please correct.

Response DM 7

Revised Exhibit MP.4-3 as requested with OB-12 and 13 as well as TS-6 moved out of slater creek channel.

Comment DM 8

Mine Plan, MP.7 – Because of the proximity of the planned facilities primarily in T57, R84 Sec.15 to the Tongue River and Goose Creek, I would like to see surface water monitoring upstream of these facilities on Goose Creek and Tongue River, and downstream of these facilities on Tongue River. Please discuss the feasibility of fulfilling this request, with reasoning.

Response DM 8

Revised text as requested. Revise Exhibit MP.7-1 with USGS stream gage location that is within the viewing area.

Comment DS 11

Mine Plan, 11) Depending upon the outcome of required overburden sampling, commitment for special handling of unsuitable overburden will be required to assure that placement of unsuitable materials so as not to hinder plant growth or to adversely affect surface or groundwater quality will be required in the Mine Plan.

Response DS 11

See section MP.4.6.1, fourth paragraph.

Comment DS 12

Mine Plan, 12) Does RAMACO provide a better detailed description of the topsoil salvage and handling process than that discussed in section MP.4.2.1? The description provided is not detailed so as to provide a description of the equipment used, the methods for assuring adequate soil salvage, or whether topsoil and subsoil salvage will follow the recommendations in Appendix D7 for stockpiling topsoil separate from subsoil. (Map Unit A Cambira Loam, Map Unit B Zigweid Loam, Map Unit C Forkwood Loam, Map Unit G Bauxson Loam, Map Unit H Haverdad Loam, Map Unit U Ulm Clay Loam) Please understand that topsoil and subsoil may only be mixed

if both meet Guideline 1 suitability criteria. Please include more detail for topsoil salvage and handling or let the LQD know where the information may be accessed.

Response DS 12

Revised text as requested.

Comment DS 13

Mine Plan, 13) Section MP.4.2.3 all topsoil stockpiles, even those stockpiled temporarily or windrowed at the edge of a disturbance, must be identified by a topsoil sign from initiation of the salvage operation as required under Chapter 4, Section (c)(D) that states that signs must be in place at the time stockpiling is begun. Therefore, the text in the first paragraph of this section stating that signs will not be required must be corrected. Signs will always be required to identify all salvaged topsoil and must be placed on all approaches to the topsoil and no more than 150 feet from the stockpile location.

> a. Additionally, all stockpiled topsoil, even windrowed along the edge of a disturbance, must be protected against wind and runoff erosion, compaction or potentially toxic materials no matter what the longevity designation of the stockpiled material. The Mine Plan must provide a commitment to these requirements.

Response DS 13

Revised text as requested.

Comment DS 14

Mine Plan, 14) Section MP.4.2.4(4.2.1?) does not discuss topsoil salvage during winter months. Salvage during the winter months, especially of shallow soil profiles, is discouraged by the LQD due to a lack of depth control caused by varying depths of permafrost. Please provide discussion concerning this subject.

> a. Even short term and temporary topsoil stockpiles must be identified on maps and the volumes accounted for in annual reports. Several criteria that must be considered are well established for placement of topsoil stockpiles and include:
>
> > i. Construction of stable areas to minimize wind and water erosion
> >
> > ii. Stockpiles will not be placed in areas where runoff water can contribute to the loss of topsoil (side hills or drainages)
> >
> > iii. Stockpiles will not be constructed on unsuitable backfill locations
> >
> > iv. Stockpiles will have associated sediment control established in advance of construction

v. Stockpiles will not be constructed at locations of known cultural or wildlife resources for which protection or mitigation is required.

b. Other topsoil stockpile construction and maintenance considerations include:

i. Stockpiles will be constructed with slopes of 3h:1v or less

ii. Bypass ditches, berms or equivalent may be used to divert runoff around stockpiles

iii. Stockpiles that will remain for less than 1 year may be revegetated or treated with urface roughing methods such as ripping or discing to reduce runoff and wind erosion potential.

Response DS 14

Revised text as requested.

Comment DS 15

Mine Plan, 15) Section MP.4.2.7, page MP 4-5. Aside from operation of soil salvage equipment with the potential for soil contamination due to blown hydraulic hoses or small fuel leaks, the LQD expects not contamination of soil during the mining operation. Contamination of subsoil and overburden is more likely. The LQD recommends that RAMACO re-phrase the section header and text to show petroleum contaminated materials being and not soils.

a. What criteria will RAMACO use to determine if spills require reporting to the DEQ, and what process will be used in spill reporting?

b. What will the operational procedure be for management of the proposed on-site landfarm for contaminated materials, and where will it be located? Will it be identified on the ground by a sign?

Response DS 15

Revised text as requested.

a. See Section MP-4.5.2 of Addendum MP-4
b. See Section MP-4.5.3 of Addendum MP-4

Comment DS 16

Mine Plan, Section MP.4.2.8. Please provide a detailed description for the disposal of empty drums, not just a citation of the EPA Rule which is probably not know by most readers of this public document.

Response DS 16

The EPA Code Federal Regulation cited is public information which may be accessed online or at a public library if the reader desires to know the specifics requirements and steps regarding container disposal.

Comment DS 17

Mine Plan, MP.4.3.1 discusses overburden removal processes. However, little detail is given to explain the actual process for overburden handling. Will the first cut be stockpiled and used to fill the last cut? When special handling is required, which is almost certain given the nature of some overburden and the need for some soil replacement materials, what assurance will be made that poor quality materials will be safely located in the backfill or in separate stockpiles, or that topsoil substitutes will be handled and stored as topsoil in a useful manner as required under Chapter 4, Section 2(b)(x)(A)? Please provide a more detailed overburden handling plan. Perhaps some of these details are observed in later sections. Please provide additional details not provided elsewhere.

Response DS 17

See Sections MP.4.3.5, MP.4.6 and MP.4.7. Revised text as requested.

Comment DS 18

Mine Plan, Section MP.4.3.4. The volumetric analysis shown in Table MP.4-4 and MP.4-5 may change depending on results of required additional overburden sampling and volumetric analysis. If the overburden depth overlying coal changes as a result of additional sampling, the volumetric analysis will also change. If post mining contour changes are necessary due to adjusted swell factors permit revision will probably not be required until the changed PMT exceeds plus or minus 20 feet of the approved at which time a Reclamation Plan revision will be required. This kind of detail should be included in the permit commitments.

Response DS 18

Revised text as requested.

Comment DS 19

Mine Plan, Section MP.4.6.1. The typical overburden sampling protocol as stated in Guideline 1 calls for one sample taken every 40 square acres of the permit area. Overburden sampling for underground mining operations differs from typical coal mine sampling protocols and is stated in the Coal Rules, Chapter 7, Section 1(a)(i)(A) which calls for overburden sampling and characterization on areas where surface operations will cause removal of overburden down to the level of the coal seam. Please

make changes to the text accordingly and perform additional overburden sampling where required.

Response DS 19

Revised text as requested.

Comment DS 20

Mine Plan, Section MP.4.3.5. A statement was made in this section that "Overburden stockpiles will only block ephemeral drainages if runoff control and sediment control measures are made and approved by WDEQ/LQD." Placement of overburden in ephemeral drainages will require a discussion of how water will be diverted around the overburden stockpile to prevent impoundment of water in addition of a discussion of sediment control measures for the stockpile to prevent of-site impacts of erosion down-slope from the stockpile. The LQD recommends that no overburden stockpiles be placed in ephemeral drainages.

Response DS 20

Revised Exhibit MP.4-3.

Comment DS 21

Mine Plan, Tables MP.1-1, MP.1-2 and MP.4-1 must show the actual years for proposed progressions, or the year 1 progression must be tied to a specific year in the Mine Plan text.

Response DS 21

Revised tables as requested. Added note saying that Year 0 corresponds to the year 2016

Comment DS 22

Mine Plan, Tables MP.4-3 and MP.4-5. Topsoil volumes appear to be underestimated in TS- 2, TS-6, TS-10 and TS-11 while underestimating the proposed volume in TS-1. Also overburden volumes appear to be underestimated in OB-4, OB-7, OB-11, OB-14 and OB-15, and overestimated in OB-16, which may affect estimates presented in TableMP.4-4 as well.

Response DS 22

Volumes are estimated based on the stripping volumes and available backfill area with excess material going to and from stock pile for contemporaneous reclamation. No updates will occur in response to this comment.

Comment DS 23

Mine Plan, Exhibit MP.4-2 and MP.4-3 must show the dates (actual years) for the salvage of topsoil and removal of overburden, or year 1 must be tied to an actual year when operations will begin (2016, 2017, etc.). The map or tables in the Mine Plan must provide proposed years and volumes for stockpile construction as well.

Response DS 23

Revised Exhibits as requested. Added note saying that Year 0 corresponds to the year 2016 on all Exhibits with years.

Comment DS 30

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30

Revised Exhibits as requested.

Comment DE 1

Mine Plan, Figure MP.1.2 and page MP-3 – MSHA and best practices may require a safety berm on this safety bench which could require a wider bench. Figure MP.1.2 notes a minimum of 35' but the text on page MP-3 just states the bench will be 35' wide. There is a real possibility this safety bench might be used for light plants so it may need to be wider for access and small vehicle use as well as providing a safety bench.

Response DE 1

Revised text as requested.

Comment DE 2

Mine Plan, Table MP.1-1 – The total disturbance doesn't seem to match the overall disturbance listed for the trench mining and facilities. Please explain or correct.

Response DE 2

Revised table as requested.

Comment DE 3

Mine Plan, Section MP.2.3, page MP-9 – The 1st sentence would be better if it started, "The explosive materials…". The 2nd sentence should replace the word "detonating"

with “explosive”. The 5th sentence in the 2nd paragraph should include cast boosters. The 6th sentence in the 2nd paragraph should discuss storage of emulsions, water gels, and slurries also. This section should also commit to proper signage of the explosive storage area. Please correct.

Response DE 3

Revised text as requested.

Comment DE 4

Mine Plan, Section MP.5.7.5, page MP-34 – The word “of” in the 2nd line of the last paragraph should be “or”. Please correct.

Response DE 4

Revised text as requested.

Comment DE 5

Mine Plan, Section MP.6.1, page MP-39 – The 1st sentence of the 1st full paragraph needs some improvement so it reads properly and makes sense. Please correct.

Response DE 5

Revised text as requested.

Comment DE 6

Mine Plan, Section MP.14.2, page MP-55 – The 2nd paragraph discusses the use of “cast primers”. The term should be “cast boosters” as it doesn’t become a primer until the detonator is added or detonating cord is attached to it. The discussion of priming holes should describe the use of a cast booster and how it is made-up to become a primer, i.e. with detonating cord or a detonator (blasting cap). Please correct.

Response DE 6

Revised text as requested.

Comment DE 7

Mine Plan, Section MP.14.3.2, page MP-56 – In the 2nd line the item “(primer with detonator)” should be changed to “(cast booster with detonator)”. Please correct

Response DE 7

Revised text as requested.

Comment DE 8

Mine Plan, Section MP.14.3.2, page MP-56 – The 2nd paragraph discusses powder factors in coal and overburden and the high end of the ranges is extremely high for the type of rock and coal in this area. RAMACO should eliminate the range and simply state powder factors will be adequate to effectively fragment the overburden and coal.

Response DE 8

Revised text as requested.

Comment DE 9

Mine Plan, Section MP14.3.3, page MP-56 – RAMACO should reword this to say that initiation will be done using non-electric or electric systems, which may include electronic detonators, shock tube detonators, detonating cord, electric detonators or a combination of these. Igniter cord is used to initiate safety fuse and it's highly unlikely that any safety fuse will be used at this mine. Please correct.

Response DE 9

Revised text as requested.

Comment DE 10

Mine Plan, Section MP.14.4, pages MP-56 & 57 – It is probable that emulsions will also be stored on site so it should be mentioned since emulsion/ANFO blends are the most widely used product in wet holes. Please correct.

Response DE 10

Revised text as requested.

Comment DE 11

Mine Plan, Section MP.14.6, pages MP-57 & 58 – Residents who request a pre-blast survey must make the request to the permittee and the Administrator of Wyoming Land Quality Division (LQD). The permittee is responsible for getting the pre-blast survey done and distributed to the person that requested it and the LQD Administrator. Please correct.

Response DE 11

Revised text as requested.

Comment DE 12

Mine Plan, Section MP.14.7, pages MP-58 & 59 – LQD will not approve protecting uninhabited structures (what LQD refers to as engineered structures) at 8.0 inches

per second (ips) of peak particle velocity. LQD would allow a maximum limit of 5.0 ips. RAMACO would have to assure that this limit was not exceeded by the use of a seismograph at these structures on all blasts. RAMACO could apply for a modified scale distance factor to show compliance with this limit of 5.0 ips by submitting a vibration study and doing a regression analysis to show the allowable ppv is not exceeded at a 95% confidence level. However, this will require the vibration study be submitted with seismograph records from shots in the mining area so it cannot be done until after some blasting has been done at the mine. Please correct this text.

Response DE 12

Revised text as requested.

Comment DE 13

Mine Plan, Section MP.14.8.1, page MP-60 – The discussion on typical pattern size should be changed to more general language. Using the parameters given the powder factor used would be approximately 0.16 lbs./CY using ANFO and in the 0.23-0.25 lbs./CY range when shooting an emulsion blend. These powder factors are not high enough to adequately fragment the overburden. Please correct.

Response DE 13

Revised text as requested.

Comment DE 14

Mine Plan, Section MP.14.8.1, page MP-60 – The 2nd paragraph says if water is in the holes a slurry or water gel explosive will be used. Most likely an emulsion/ANFO blend with good water resistance will be used in wet holes and not a slurry or water gel. Please correct.

Response DE 14

Revised text as requested.

Comment DE 15

Mine Plan, Section MP.14.8.1, page MP-60 – The 3rd paragraph discusses the explosive weight per hole and the powder factors. The explosive densities listed are correct but the pounds per hole and powder factors are incorrect. In a 7.875" hole and with a density of ANFO of 0.85 g/cc the pounds/foot of hole is 17.95 lbs. and with 24' of powder column the pounds/hole is 431 lbs., making the powder factor = 0.16 lbs./CY. Similarly using an emulsion blend of 1.32 g/cc the pounds/foot = 27.87 lbs. and the pounds per hole would be 669 lbs. so the powder factor =o.25 lbs./CY. In the 50' hole described with 26' of stemming and 24' of powder the powder distribution is

poor so it would likely lead to blocky material near the top of the bench. Please correct.

Response DE 15

Revised text as requested.

Comment DE 16

Mine Plan, Section MP.14.8.2, page MP-61 – Drilling a 35' x 35' pattern in a 15' thick coal seam with a 7.875" hole and 4.5' of stemming will probably result in excessive flyrock, stemming ejection, high airblast and hard zones between the holes. Expecting to stem 4.5' is not realistic – in the field the blaster is going to try to hold for 4' or 5' of stemming. Again RAMACO discusses using slurry or water gel in wet hole when an emulsion/ANFO blend with high water resistance would probably be used. Please correct. Also the powder factor listed for coal is probably a little high so it would be better to just say that the powder factor will sufficient to fragment the coal for the prime movers. Please correct.

Response DE 16

Revised text as requested.

Comment DE 17

Mine Plan, Section MP.14.10, page MP-63 – The last bullet item says that detonation during electric storms might be a reason for unscheduled blasting. This is confusing because it makes it sound like the operator would shoot during electric storms and the only safe thing to do when an electric storm approaches is clear the pattern and keep everyone a safe distance away until the storm passes. Please correct.

Response DE 17

Revised text as requested.

Comment DE 18

Mine Plan, Addendum MP-7, Blaster's Log – Under the "Holes" heading RAMACO should use "burden" not the term "burden spacing". On the 2nd page the word "signiture" should be changed to "signature". Please correct.

Response DE 18

Revised text as requested.

Comment MK 23

Mine Plan, Section MP.20 Alluvial Valley Floors, The discussion of underground mining in AVFs does not seem necessary given there is no plans for underground mining at the Brook Mine. Furthermore, it is conceivable that circumstances could exist where underground mining of an AVF would not be allowed by the LQD. For example, if the AVF was significant to farming and underground mining of the AVF would result in surface effects such that material damage to the AVF would occur. (MDK)

Response MK 23

While no underground mining is proposed within delineated AVFs, the mine maintains this option. If underground mining is ever planned under the AVF, the appropriate revisions will be made. Revised text as requested.

Comment MK 46

Mine Plan, Section MP.4.1 Mining Sequence, 20. On Exhibit MP.4-1, please attempt to show the areas that would be highwall mined versus surface mined. These layers are currently not found until Exhibit MP.15-1. Alternatively, the text in this Section could specify that the areas to be highwall versus surface mined are shown in Exhibit MP.15-1. (MDK)

Response MK 46

Revised text as requested.

Comment MK 47

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 21. Only Slater Creek and Hidden Water Creek are labeled and shown in Exhibit MP.5-1. In order to better evaluate the Hydrologic Control Plan, please provide labels and locations for the other stream channels, including Tongue River, Goose Creek, East Fork Earley Creek, and the other unnamed channels (as shown on the USGS 24K Quad) on the proposed permit area. (MDK)

Response MK 47

Revised Exhibit MP.5-1 as requested.

Comment MK 48

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 22. Exhibit MP.5-1 shows overburden stockpiles OB-13 and OB-12, as well as topsoil stockpile TS-6, occurring directly over the Slater Creek channel. The Exhibit does not show any diversion ditches to be used in these locations. Please either move the location of the

stockpiles or present a plan to use a diversion to route Slater Creek around the stockpiles. (MDK)

Response MK 48

Revised Exhibit MP.5-1 as requested.

Comment MK 49

Mine Plan, Section MP.5.2 Sedimentation and Wastewater Impoundments, 23. Exhibit MP.5-1 shows the locations of two "sediment basins". Are these considered the same as "sedimentation impoundments", as discussed in this Section? If so, the designs for these two impoundments are not found within the Mine Plan. (MDK)

Response MK 49

The "sediment basins" shown in Exhibit MP.5-1 are not considered the same as the "sediment impoundments(reservoirs)" . Sediment Basins are considered an Alternative Sediment Control Measure and are discussed in Addendum MP-1. As such, the design for these "sediment basins" are not included in the Mine Plan. However, the design criteria and construction standards for "sediment basins" are similar to those discussed within Section MP.5.2 of the Mine Plan. Revised text as requested.

Comment MK 50

Mine Plan, Section MP.5.3 Flood Control, 24. This section discusses flood control reservoirs but it is not mentioned how many flood control reservoirs would be constructed and where their locations would be. Please provide this information to comply with LQD Coal Rules and Regulations, Chapter 2, Section 5(a)(i)(D)(IV). (MDK)

Response MK 50

Revised text as requested.

Comment MK 51

Mine Plan, Section MP.5.4 Diversions, 25. This section mentions permanent diversions, but there are no apparent plans for permanent diversions. Please discuss if permanent diversions are anticipated as part of the mining operation, or if all diversions will be temporary. (MDK)

Response MK 51

Revised text as requested.

Comment MK 52

Mine Plan, Section MP.5.4 Diversions, 26. Exhibit MP.5-1 shows only one diversion ditch for Hidden Water Creek in T57N, R84W, Section 9. Please discuss this particular diversion and its typical design in more detail in Section MP.5.4. (MDK)

Response MK 52

Revised text as requested. Add design exhibit of the Hidden Water diversion ditch.

Comment MK 53

Mine Plan, Section MP.5.5 Culverts, 27. Please provide a brief statement that commits to a periodic culvert inspection and maintenance plan to ensure that culverts will function properly over time. (MDK)

Response MK 53

Revised text as requested.

Comment MK 54

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 28. The first sentence references a sedimentation reservoir. Where is the location of this sedimentation reservoir? Are these the "sediment basins" shown in Exhibit MP.5-1? If not these sedimentation reservoirs need to be added to this Exhibit. (MDK)

Response MK 54

Revised text as requested.

Comment MK 55

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 29. The first paragraph references treating and discharging pit water. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 55

Revised text as requested.

Comment MK 56

Mine Plan, Section MP.6.1 Surface Water, 30. Exhibit MP.1-1 shows surface disturbance directly over a few areas of Slater Creek and Hidden Water Creek. Please identify the source of disturbance in these areas. Direct disturbance of the channel should be avoided unless there is a plan for a diversion to route the stream around the disturbance. (MDK)

Response MK 56

See response to Comment MK 76, 88 and 99. Revised text as requested.

Comment MK 57

Mine Plan, Section MP.6.1 Surface Water, 31. The mining trenches are often discussed with reference to Exhibit MP.1-1. However, the trenches are not shown on this Exhibit. Please add the locations of the trenches to Exhibit MP.1-1. (MDK)

Response MK 57

Revised Exhibit MP.1-1 as requested.

Comment MK 58

Mine Plan, Section MP.6.1 Surface Water, 32. On Page MP-39, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining disturbance will be treated prior to discharge. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 58

Revised text as requested.

Comment MK 59

Mine Plan, Section MP.6.1 Surface Water, 33. Please discuss the diversion ditch for Hidden Water Creek in the first carryover paragraph on Page MP-39. (MDK)

Response MK 59

Revised text as requested. See Hidden Water Creek diversion Exhibit MP.5-2 for further details.

Comment MK 60

Mine Plan, Section MP.6.1 Surface Water, 34. On Page MP-40, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining activities will be treated prior to discharge. Please reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 60

Revised text as requested.

Comment MK 61

Mine Plan, Section MP.6.1 Surface Water, 35. On Page MP-40, there is a sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility". This statement is unclear. Are the impacts to the actual Slater Creek channel or the uplands and other tributaries in the watershed? Is it reduced ground cover and increased soil erodiblity? Please provide a more explicit description of the possible impacts. (MDK)

Response MK 61

See response to Comment MK 56, 76, 88 and 99. Revised text as requested.

Comment MK 62

Mine Plan, Section MP.6.1 Surface Water, 36. Please provide a discussion on whether the proposed mining operation would affect surface water quality such that designated uses would be affected on the major streams on and adjacent to the proposed permit area. (MDK)

Response MK 62

Revised text as requested.

Comment MK 63

Mine Plan, Section MP.6.1 Surface Water, 37. The text describes possible reductions in peak flows and storm volumes. Please describe in the PHC if the proposed mining operation will have any effects on nearby or downstream surface water rights. (MDK)

Response MK 63

Revised text as requested.

Comment MK 64

Mine Plan, Section MP.6.1 Surface Water, 38. Please add a brief statement to the PHC that if it is determined that the mining operation affects a surface water right, that water right would be replaced with a water source of similar quantity and quality as provided by W.S. § 35-11-415(b)(xii). (MDK)

Response MK 64

Revised text as requested.

Comment MK 65

Mine Plan, Section MP.6.1.1 Land Erosion Stability, 39. It is unclear the intent of this section. It seems to be out of place in the mine plan, as it discusses the USLE in the

context of only native and reclaimed conditions. Furthermore, no data other than the K factors are presented in Mine Plan Tables (Table MP.6.1). The Reclamation Plan also does not discuss applying the USLE, so it would seem that Section MP.6.1.1 should be removed unless a USLE analysis is completed of pre- vs during- vs postmine erosion predictions. (MDK)

Response MK 65

Section MP.6.1.1 has been removed.

Comment MK 66

Mine Plan, Section MP.7.1 Surface Water Monitoring, 40. It is unclear why reservoirs will be monitored in the operational monitoring program when these features were not sampled for during baseline characterization. If the reservoirs have the potential to be affected by the mining operation they should be sampled prior to mining with this information presented in Appendix D6. (MDK)

Response MK 66

Revised text as requested.

Comment MK 67

Mine Plan, Section MP.7.1 Surface Water Monitoring, 41. Please add the reservoir monitoring locations listed in Table MP.7-1 to Exhibit MP.7.1. (MDK)

Response MK 67

Revised Exhibit MP.7.1 as requested.

Comment MK 68

Mine Plan, Section MP.7.1 Surface Water Monitoring, 42. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

Response MK 68

See response MK

Comment MK 69

Mine Plan, Section MP.7.1 Surface Water Monitoring, 43. Please identify what type of water quantity data will be generated from the continuous stage monitoring. For example, will mean daily flow rates and/or peak daily flow rates be estimated, as these would likely be submitted to the LQD in the Annual Report? (MDK)

Response MK 69

Revised text as requested.

Comment MK 70

Mine Plan, Section MP.7.1 Surface Water Monitoring, 44. The text in the last paragraph on Page MP-45 states that water quality samples will be collected from a single station using an ISCO automatic sampler. Please identify in the text which station this is. Also, please explain the rationale for using an ISCO sampler at only one of the four stream monitoring sites. (MDK)

Response MK 70

Revised text as requested. The station equipped with the ISCO automatic sampler was the only station equipped with such a device due to the stations location as well as expected flows. Quarterly grab samples taken at stations upstream of mining disturbances will give an accurate representation of water quality entering the permit boundary. Since the station equipped with an automatic sampler is located near the area in which Slater Creek exits the permit boundary, an automatic sampler allows the operator see if the mining activities of the Brook Mine have an impact on the water quality of Slater Creek as the highest chance water quality is affected will occur during precipitation events. An automatic recorder was not installed at the station downstream of disturbances on Hidden Water Creek because the recorded and modeled flows for the drainage are extremely low. No observable flow had been recorded on any surface water station along Hidden Water Creek, despite precipitation events having occurring. As such, any data collected by an automatic sampler on Hidden Water Creek would occur during extreme precipitation events in which the flows through Hidden Water Creek would likely have high turbidity and be an unrealistic representation of the water quality within Hidden Water Creek.

Comment MK 71

Mine Plan, Section MP.7.1 Surface Water Monitoring, 45. The text in the first paragraph on Page MP-46 states that data will be evaluated to determine if any surface water and groundwater interactions exist. It would seem that any interactions should have already been identified during the baseline characterization of the hydrological system on and near the proposed permit area. It does not appear that the permit application discusses surface/groundwater interactions. (MDK)

Response MK 71

Revised text as requested. The monitoring is a continuation of the baseline monitoring sites.

Comment MK 72

Mine Plan, Section MP.8 Water Use, 46. Please state in the text that all water from surface reservoirs or wells will be used under appropriate permits from the State Engineer's Office (SEO). (MDK)

Response MK 72

Revised text as requested.

Comment MK 73

Mine Plan, Section MP.8 Water Use, 47. It is advised that the applicant discuss with the SEO-Interstate Streams Division any implications that water use may have under the Yellowstone River Compact. (MDK)

Response MK 73

Revised text as requested.

Comment MK 74

Mine Plan, Addendum MP-6 Subsidence Control Plan, Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation, 48. The text states that subsidence monitoring would be discontinued if no evidence of subsidence occurred after six months after highwall mining. Please include a clarifying statement that the applicant would remediate subsidence up until bond release is approved, even if the subsidence was detected later than the six months of initial monitoring. (MDK)

Response MK 74

Please see revision to last paragraph of Addendum MP-6

Comment MuK 32

Mine Plan, 32. Please provide an electronic copy of the groundwater model referenced in Addendum MP-3. In addition, please provide the GIS projection coordinate of the model files that will enable the LQD to plot the model results in GIS for the purposes of producing the CHIA (Cumulative Hydrologic Impact Assessment). The LQD review of the model files might potentially generate additional comments, clarifications or questions. (MK)

Response MuK 32

An electronic copy of the groundwater model Will be provided under separate cover. The elements in the model are based on the Wyoming East Central NAD 83 state plane coordinate system. To convert from model Grid to the state plane coordinates the X

offset is 1367387.512 and the Y offset is 1915004.382. There is no rotation from the model grid to the state plane coordinate system.

Comment MuK 33

Mine Plan, MP.1.1 Type of Mine, 33. Page MP-1 states, "Below the Tongue River Member is the Lebo shale member of the Fort Union Formation which contains the Masters Seam (Cardno MM&A, October 2013)." This statement is not consistent with Table D5.3-1, Page D5-T1 and other descriptions in Appendix D5. Table D5.3-1 indicates Masters Coal seam is in the Tongue River Member. Please clarify and make appropriate changes throughout the submittal (Example: MP 4.4). (MK)

Response MuK 33

Revised text as requested.

Comment MuK 34

Mine Plan, MP.1.1 Type of Mine, 34. Major coal seams on the Brook Mine include: Dietz (1,2,3), Monarch, Upper Carney, Lower Carney and Masters.". Dietz (1,2,3) coal seam is not included in the description presented in Section D5.3.3.3, Appendix D5. Please clarify: (i) the seams that will be mined by the Brook Mine and (ii) include the description of all the coals seams as appropriate in Appendix D5 and Appendix D6. (MK)

Response MuK 34

Please refer to Mine Plan Section MP.4.4.1 for targeted coal seams at the Brook Mine.

Comment MuK 35

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, Consider using the groundwater model referenced in Appendix D-3 to provide a description for a range of estimates on anticipated dewatering rates/volumes and groundwater inflows to the mine pit. (MK)

Response MuK 35

The text in Section MP.5.8 is to indicate that water entering the pit from either groundwater or surface water will be controlled using sumps and treated prior to discharge.

Comment MuK 36

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, 36. Please clarify the anticipated effects of the faults on the dewatering plan or groundwater impacts during mining. (MK)

Response MuK 36

Since the water will be collected in a sump, treated, and then discharged, the faults should have no effect.

Comment MuK 37

Mine Plan, MP.5.9 Dewatering Wells, 37. Please provide a brief discussion on the anticipated quality of groundwater removed at various stages of mining. (MK)

Response MuK 37

Revised text as requested.

Comment MuK 38

Mine Plan, MP.5.9 Dewatering Wells, 38. If groundwater is discharged into a stream channel, anticipated discharge flow rate, water quality, and estimated seasonal discharge of the groundwater should be tabulated. The availability and suitability of this water for downstream water users should also be evaluated. Please clarify if this is an expected mechanism to discharge pumped groundwater. (MK)

Response MuK 38

Revised text as requested.

Comment MuK 39

Mine Plan, MP.5.8 Groundwater Rights, Please include a description on any expected degradation of groundwater quality caused by the mining operation (including lateral flow through spoils) in the adjudicated wells. (MK)

Response MuK 39

Revised text as requested.

Comment MuK 40

Mine Plan, MP.6.2.Groundwater, 40. Please provide a brief discussion on any hydrologic effects caused by anticipated changes in recharge to the aquifers during mining. (MK)

Response MuK 40

Revised text as requested.

Comment MuK 41

Mine Plan, MP.6.2.Groundwater, 41. Please provide an assessment of any subsidence effects (Addendum MP-6) on the hydrologic system during operations. (MK)

Response MuK 41

Revised text as requested.

Comment MuK 42

Mine Plan, MP.6.2.Groundwater, 42. Please discuss if there are any expected impacts on groundwater quality caused by subsidence. (MK)

Response MuK 42

Revised text as requested.

Comment MuK 43

Mine Plan, MP.6.3.2 Plan to Mitigate the Impacts on Groundwater, 43. If the quality or quantity of adjudicated water supplies are affected, then an alternative source should be identified as part of the mitigation plan. Please provide a statement to meet this statutory requirement (W.S. § 35-11-415(b)(xii)). (MK)

Response MuK 43

Revised text as requested.

Comment MuK 44

Mine Plan, MP.7.2 Groundwater Monitoring, 44. Please clarify the lack of any shallow monitor wells near Hidden Water Creek, Goose Creek and Tongue River alluvium and if this will be an impediment to completely characterize the groundwater impacts during mining. (MK)

Response MuK 44

Hidded Water Creek has no alluvium ttherefore, no shallow well can be installed. Goose Creek in the area of the permit is through a reclaimed mine area (pre-law) therefore there is not alluvium. As discussed throughout we will not impact the Tongue River Alluvium. RAMACO will add wells in the Tongue River Alluvium.

Comment MuK 45

Mine Plan, MP.7.2 Groundwater Monitoring, 45. Please clarify the possibility of any of the monitor wells shown in Exhibit MP.7-7 being discontinued due to any constraints in the proposed-mine plan (example: mined through). (MK)

Response MuK 45

Revised text as requested.

Comment MuK 46

Mine Plan, MP.8 Water use, 46. Page MP-47 states, "Industrial water will be obtained from groundwater wells or from water collected in sediment and flood control reservoirs." Please clarify if the groundwater wells mentioned in this statement are wells that will be exclusively used as industrial supply wells or if they are same as dewatering wells. (MK)

Response MuK 46

Revised text as requested.

Comment MuK 47

Mine Plan, MP.8 Water use, 47. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a discussion comparing the reported water use by other mines of similar size in the Powder River Basin.

Response MuK 47

No record of reported water use was discussed in the annual reports submitted to WDEQ for several different mines within the Powder River Basin. As such, a comparison was unable to be made.

Comment MuK 48

Mine Plan, MP.8 Water use, 48. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a comparison of this estimated total water use against the various estimated water sources available during mining (Example: from dewatering wells). It will be very helpful to provide a discussion on contingency measures during extreme wet/dry years or if the proposed mine plan does not require extensive dewatering. (MK)

Response MuK 48

RAMACO is currently working to solidify the necessary water right for this water. The sources and associated amounts are in discussions and therefore not presented at this time.

Comment MuK 49

Mine Plan, MP.8 Water use, 49. Please clarify if there is any expected variability in this projected water use (example: is it closely related to the mine plan). (MK)

Response MuK 49

Revised text as requested.

Comment MuK 50

Mine Plan, Addendum MP-3 Groundwater Model, 50. Page Addendum MP-3-19 states, "Since, most of the wells within the modeled domain are stock wells with intermittent pumping and completed in geologic strata below the Masters Coals, they are relatively inconsequential to the groundwater system modeled in this report." Please provide a Figure (or reference) to show these wells, their depths and discuss on why they are hydrogeologically isolated from the effects of the proposed mine. (MK)

Response MuK 50

All the groundwater rights are tabulated within Appendix B of the adjudication volume and Exhibits 5 and 8 in the adjudication volume show the locations of each respective groundwater right. Please note that adjudication Exhibits 5 and 8 include monitor wells in addition to stock and domestic wells so all the wells shown on the exhibits are not necessarily wells that are being used as water supply wells. In fact, almost all the completed water wells shown on Exhibit 5 of the adjudication volume within the Brook Mine permit area are actually monitor wells. The Cross Sections presented in Exhibit 2 of Addendum D5-3 show the depth of the coal seams at various locations within the Brook Mine Permit. For comparison, the depths of each well are listed in the tabulation in Appendix B of the adjudication volume.

The statement on Page MP-3-19 "they (the wells) are relatively inconsequential to the groundwater system modeled in this report" means that the wells are not believed to be significant stressers to the groundwater system because of their relatively low pumpage rates. This statement should not be interpreted to mean that all of the stock and domestic wells in the area are hydrologically isolated from the coals proposed for mining within the Brook Mine Permit area. In fact, Section 4.9 of Addendum MP-3 specifically describes 26 wells that, based on their depths and locations, are likely completed within the coals. The expected impacts to these wells were assessed as part of the modeling exercise. Based on a comparison between the reported depths in the water rights tabulation in Appendix B of the adjudication volume and the geologic cross sections in Addendum D5-3, the other stock and domestic wells in the area were determined to be completed either in the Tongue River alluvium, or deeper strata below the Carney coal and do not have a direct hydrologic connection to the coals proposed for mining in the Brook Mine and were not specifically evaluated in the groundwater model.

Along the eastern edge of the model domain there are a large number of CBM wells and, based on available data presented in the water rights tabulation in Appendix B of the Adjudication volume, these wells are likely pumping water from the Carney and Masters coal seams. The impacts from the CBM wells are described in detail within

later sections of the report. However, the text on page MP-3-19 does not speak to the CBM wells. Minor changes to the text on page Addendum MP-3-19 and additional explanatory text have been added to this page to provide further clarification.

Comment MuK 51

Mine Plan, Addendum MP-3 Groundwater Model, 51. Page Addendum MP-3-20 states, "The faults are significant in lateral extent and form natural no flow boundaries". Please provide a discussion (or refer to a discussion) on how these faults were determined to be no flow boundaries. (MK)

Response MuK 51

Faulting within the permit area was mapped by B.E. Barnum on the USGS Monarch Quadrangle. As noted in Section D5.3.2, Barnum indicates fault displacements on the order of 50 feet within the mine area. Lithologic logs provided in Addendum D-5-3 demonstrate that the dominating lithology in the column is claystone and coal thicknesses are less than 20 feet. This offset geology from faulting results in a claystone hanging or footwall adjacent the coal aquifer and therefore discontinuity of the aquifer and an assumed hydrologic flow boundary.

Comment MuK 52

Mine Plan, Addendum MP-3 Groundwater Model, 52. Please clarify the reason for not estimating vertical hydraulic conductivity of the interburden using an aquifer test. (MK)

Response MuK 52

Response to this comment is partially clarified in responses to MK's Comments 18 and 19 above. During the aquifer test conducted at the 578409 well cluster no response was observed across the interburden, therefore, the vertical hydraulic conductivity of the interbuden was too low to measure in the aquifer test. Furthermore, the static water levels in the Masters and Carney coal seams are different which demonstrates that the hydraulic conductivity of the interburden is very low. Therefore, literature values were utilized and adjusted within reasonable bounds to improve model calibration.

Comment MuK 53

Mine Plan, Addendum MP-3 Groundwater Model, 53. Page Addendum MP-3-25 states, "With no unnatural stresses on the system …" Please provide a discussion of the CBM impacts on the water levels. It appears that the hydrographs presented in Appendix D6 do not show the impacts of CBM. (MK)

Response MuK 53

There are multiple CBM production wells located along the eastern side of the groundwater domain. In order for the CBM producers to be able to produce gas it is necessary to significantly lower the water levels in the coal to release the gas in the coal fractures. CBM production began in this area around 1999. Therefore, it was conservatively assumed that CBM production has already resulted in lowering the water levels in the coal aquifers to the top of the coal aquifer along the eastern edge of the model domain and the general head boundaries were set accordingly to simulate this effect. Even though water level data in the coal aquifer prior to CBM production is limited because of the lack of monitor well data, prior to CBM production, the potentiometric head in the coal was estimated to be significantly higher than the top of coal.

The hydrographs presented in Appendix D6-9 do not show the impacts of CBM because they show water level changes over a one year period roughly 13 years after CBM production began in the area, and if the wells were going to be impacted by CBM, it is likely that they have already been impacted. Please note that the model assumed that CBM production would continue into the future resulting in the water levels in the coal being maintained at unnaturally low levels. Therefore, the model has conservatively estimated the combined impacts from both CBM and the proposed coal mining activities. Currently, a large majority of the CBM wells are being plugged and abandoned which may result in higher than predicted water level recovery rates in the coal aquifer.

Text edits were made to page MP-3-25 to help clarify the discussion.

Comment MuK 54

Mine Plan, Addendum MP-3 Groundwater Model, 54. There are two sub-sections for recharge, Section 2.5.3 and Section 2.6.1. Please clarify/consolidate. (MK)

Response MuK 54

The two subsections have been combined into one subsection under Section 2.6.1

Comment MuK 55

Mine Plan, Addendum MP-3 Groundwater Model, 55. Page Addendum MP-3-26 states, "… drain cells were placed in the model to simulate seeps from the outcrops." Please provide a discussion on the evidence for seeps (or reference) observed during field surveys. Were there any field data collected on the location and flow rates of these seeps? (MK)

Response MuK 55

Evidence of seeps from outcrops can be seen in Color Infared Imagary (CIR), which is included in the permit as Exhibit D11.1-1. The areas of seepage are manifested on the CIR imagery as areas with more vegetation. Evapotranspiration from the vegetation growing along the seep removes all the water before it emanates from the formation into the drainage. Therefore, no measurements of the seepage rate at the outcrops were possible or are available. Additional discussion explaining the need for drain cells within the model is provided in Section D6.2.2. Also, text was added to Section D6.2.2 to clarify that no field flow measurements were available.

Comment MuK 56

Mine Plan, Addendum MP-3 Groundwater Model, 56. Page Addendum MP-3-27 states, "River cells from MODFLOW's river boundary conditions package were placed in the model to simulate the Tongue River and Goose Creek." Please provide a conceptual discussion supported by field observations on the type/nature of interaction of these streams with groundwater (Gaining stream vs. losing stream). (MK)

Response MuK 56

As described in Section 2.3 of MP-3, the dip of the strata in the project area is generally east-southeast into the Powder River Basin and the groundwater flow direction follows this trend regionally. As such, the Tongue River comes into contact with the coal seams of interest near the updip side of the coal seams. Interactions between the surface water and groundwater occur at those points where permeable formations sub-crop into alluvial/surface water bodies. Both the Carney and the Masters coal subcrop under the Tongue River near the western edge of the model domain. Conceptually these subcrops are the only places where the coals would be in contact with the surface water. Section 2.3 of Addendum MP-3 describes the conceptual groundwater flow in some detail.

As described in Addendum MP-3 Section 2.3, the Carney coal is largely dry to the north and west of its subcrop into the Tongue River alluvium and becomes saturated at an elevation just above the elevation where it subcrops beneath the Tongue River alluvium. Therefore it is likely that the Carney Coal would lose water to the Tongue River alluvium. The potentiometric surface in the Masters Coal is roughly the same as the potentiomentric surface of the Tongue River where the Masters coal subcrops beneath it. A review of the steady state groundwater model shows that where the River boundary cells are immediately above the Masters Coal the net effect is that the River boundary cells input approximately 3.2 gpm into the model. Conversely, near the upper and lower Carney Coal/Tongue River outcrops the River cells are taking roughly 0.16 gpm out of the model. Since the coal outcrops occur beneath the Tongue River there is no way to field verify these flows but conceptually they do seem reasonable.

The river boundary cells extend to the bottom of the layer in which they are placed as discussed in response to comment MUK 74 and MUK 84. The River boundary cells were placed in Layer 1 to the confluence of Goose Creek and the Tongue River which extends east of the area where the Carney Coal would be in communication with the Tongue River alluvium. Due to the fact that the River boundary cells extend to the bottom of the layer they do provide a conduit for the River to provide recharge into the Carney Coal even though the River would be physically separated from the coal by multiple zones of low permeability shales. The estimated recharge occurring in this area from the Tongue River to both layers 1 and 2 is approximately 8 gpm. The discharge into the coals is likely conservatively overestimated and not all of the 8 gpm would necessarily end up in the coal as some of it also discharges to layer 1. As such, the model conservatively estimates that up to 11.2 gpm would be discharged from the river to the coals or overburden between the Carney Coal and the Tongue River.

The strata located above the coal seams of interest is generally claystone with low permeability as discussed in MP-3 Section 2.2. Therefore, interaction of groundwater between these units and the Tongue River or Goose Creek is very limited. Within the model domain, the Tongue River Alluvium does have large deciduous trees and other vegetation immediately adjacent to the river. Conceptually, evapotranspiration from the vegetation along the Tongue River would indicate that through the model domain the Tongue River is a losing Stream. Throughout most of the model domain where the Tongue River is present, there low permeability overburden strata between the Tongue River alluvium and the coal seams which hydrologically isolate the Tongue River from both the Masters and the Carney coal seams. Since Goose Creek is located in the eastern portion of the model domain where the coal is significantly below the alluvium and the clay intervals are even thicker, the Goose Creek alluvium is also hydrologically separated from the Masters and Carney Coals. The Goose Creek alluvium would likely see similar losses to evapotranspiration that would be observed in the Tongue River alluvium.

Comment MuK 57

Mine Plan, Addendum MP-3 Groundwater Model, 57. Please provide a discussion on any contribution of groundwater baseflow to the major surface water bodies within the permit boundary. (MK)

Response MuK 57

As described in the response to comment MuK 56, conceptually, very little groundwater base flow from the Carney and Masters coal seams are expected to contribute to the surface water bodies within the permit boundary. The mass balance table provided in response to comment MuK 73 demonstrates that much more water is expected to enter the groundwater system from the surface water bodies (river cells) than is contributed to the surface water bodies from groundwater baseflow.

Comment MuK 58

Mine Plan, Addendum MP-3 Groundwater Model, 58. In section 3.2 MODFLOW Input Files, was aerial recharge used as an input file? Please clarify if evapotranspiration was considered as a discrete input or lumped into net aerial recharge. (MK)

Response MuK 58

Yes, the recharge package was used as an input file. Section 3.2 of Addendum MP-3 was updated to include a discussion of the recharge package. The evapotranspiration (ET) package was not utilized in the model. To address the effects of ET, the recharge rates were adjusted down in proportion to the estimated losses created by ET. Within most of the model domain where evapotranspiration would occur, the low permeability overburden between the surface and the coal seams of interest provide a hydrologic barrier so the evapotranspiration was ignored in these areas.

Comment MuK 59

Mine Plan, Addendum MP-3 Groundwater Model, 59. Page Addendum MP-3-31 states, "Layer 1 – represents the coal overburden". Please clarify if the alluvial aquifer was included in the model. Please provide justification for not considering the alluvial aquifer in the model. (MK)

Response MuK 59

As described in the responses to comments MuK 56 and MuK 57, the only place within the model domain where there is potential for interactions between any alluvial aquifers and the coal seams of interest is where the coal is directly below the Tongue River alluvium or Slater Creek colluvium. Where the coal is in direct contact with alluvium/colluvium, layer 1 (the coal overburden) was assigned a higher vertical hydraulic conductivity to allow the layer to better emulate the alluvial/colluvial aquifer in this location. This zone of higher hydraulic conductivity in layer 1 is depicted on Addendum MP-3 Figure 4.2-1. Groundwater Vistas does not allow discontinuous layers throughout the model domain so this allowed the alluvium/colluvuim to be effectively be modeled without the need to add an additional layer across the top of the entire model domain. This helped to improve the computational efficiency of the model. Since the overburden has a very low hydraulic conductivity and hydrologically separates the coals from the other alluvial/colluvial deposits within a large portion of the model domain, there is no reason to model any additional alluvial/colluvial deposits. To help clarify this comment Figure 4.2-1, was prepared and sections 2.5 and 4.2 of MP-3 have been updated.

Comment MuK 60

Mine Plan, Addendum MP-3 Groundwater Model, 60. Page Addendum MP-3-31 states, "Layer 3- Carney Interburden. This interval is generally of low to very permeability in

the western portion of the Project Area". Please clarify how the areas where Layer 3-Carney Interburden is absent are treated in the groundwater model. (MK)

Response MuK 60

Ground Water vistas does not allow discontinuous layers. Therefore, Layer 3 is continuous across the entire model domain. Where the coal seam coalesces on the east portion of the model, the Layer 3 interburden was modeled as coal by setting hydraulic properties of the layer equivalent to the values of the overlying and underlying coal seams. Additional text has been added to Section 4.2.1 of Addendum MP-3 to further describe how the hydraulic conductivities were assigned to layer 3.

Comment MuK 61

Mine Plan, Addendum MP-3 Groundwater Model, 61. Please include a discussion of the thickness of all model layers. (MK)

Response MuK 61

Addendum MP-3 Section 2.5 describes the thickness of the various coal seams. Additional text has been added to MP-3 Section 4.1 to generally describe the thickness of each layer. Following are the modeled thicknesses for each layer:

- Layer 1-The thickness for this layer varies throughout the model domain. Near the western side of the model the layer is often absent where all the strata geologically younger than the Carney coal has been eroded off. These areas are generally represented as no flow cells in the model. Within the eastern portion of the model Layer 1 can be substantial. In the model the maximum thickness of Layer 1 in the eastern side of the model domain was approximately 1,100 feet.

- Layer 2-The Upper Carney coal was modeled with a constant thickness of 7 feet throughout the model.

- Layer 3-The Carney coal interburden layer varied in thickness from 4 feet up to 15 feet within the active portion of the model.

- Layer 4-The Lower Carney coal was modeled with a constant thickness of 8 feet within the model.

- Layer 5 The Carney/Masters coal interbuden layer varied in thickness from 4 feet up to 107 feet within the model.

- Layer 6-The Masters coal was modeled with a constant thickness of 6 feet within the model.

Comment MuK 62

Mine Plan, Addendum MP-3 Groundwater Model, 62. Please include a justification for not considering the underlying zones beneath the Masters coal seam in the model. (MK)

Response MuK 62

The Masters coal is underlain by the Lebo Shale. The Lebo Shale is a thick (Appendix D5 Section D5.2.3), regional confining interval in the project area as described in Mine Plan Addendum MP-3 Section 2.1. There are no aquifer units identified within the model domain within the Lebo Shale with direct hydrologic connection to any of the elements of the model. Since the Lebo Shale is a regional confining unit, if it had been included in the groundwater model, it would have been assigned hydraulic parameters typical of a shale interval (very low hydraulic conductivity) and it would have essentially been a no flow barrier to the more permeable Masters coal above it. Groundwater Vistas treats the bottom of the model as a no flow boundary. Therefore, the Lebo Shale is for all practical purposes included in the model as a confining interval with the way the model is currently defined.

Comment MuK 63

Mine Plan, Addendum MP-3 Groundwater Model, 63. Please provide appropriate cross section(s) of the model grid overlaid with the drill hole data collected during baseline characterization. This will help the evaluation of the adequacy of model layer thicknesses against the stratigraphic field data. (MK)

Response MuK 63

As noted in Addendum MP-3 Section 4.1, the Groundwater model layers were developed from a 3D geologic model developed from drill hole data within the project area developed for the purposes of making volumetric coal estimates. Minor updates to the surfaces were made where new data provided by additional exploration drilling was completed. An additional figure was developed (Addendum MP-3 Figure 4.1-3) and included in Addendum MP-3 that depicts actual cross sections cut from the groundwater model. Addendum D5-3 of Appendix D5 includes geologic cross sections with drill hole data that can be compared back to the actual cross sections included in Figure 4.1-3 of Addendum MP-3.

Comment MuK 64

Mine Plan, Addendum MP-3 Groundwater Model, 64. Please clarify how the layers were modeled to represent the confined/unconfined aquifer types. (MK)

Response MuK 64

Groundwater Vistas has a "layer type" control that was set to #5: Confined/Unconfined, which allows the model to determine whether to use storativity or specific yield for the storage coefficient based on the elevation of the water elevation vs. formation tops. Groundwater Vistas handles the aquifer type classification without further inputs.

Comment MuK 65

Mine Plan, Addendum MP-3 Groundwater Model, 65. In addition to model calibration, please provide justification for the recharge rates applied in the model including any literature references. (MK)

Response MuK 65

The initial recharge rates utilized in the model were initially estimated based on a USGS study (Water-Resources Investigations Report 01-4278) conducted on the eastern side of the Powder River basin and the Black Hills area. The study entitled, "Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 1931-98." was prepared by JM Carter and D.G Driscoll. In the study Carter and Driscoll reported recharge rates varying from 0.04 inches per year to 2.93 inches per year. The 2.93 inch per year recharge rate was reported within the Madison limestone formation outcrops in the Black Hills while the lower range of recharge rates reported by Carter and Driscoll were estimated for areas in the eastern periphery of the Powder River Basin where the precipitation and soil types are similar in nature to the Brook Mine Permit area. Since calibrated recharge rates in the key recharge areas (the coal outcrops and the scoria outcrops) were within the range of values developed by Carter and Driscoll, the recharge rates used in the model are considered reasonable. Please note that the recharge rate throughout Layer 1 is much lower than the range of recharges developed by Carter and Driscoll. This is reasonable because much of Layer 1 has no hydrologic connection to the underlying coal seams. Additional justification for recharge rates applied in the model is discussed in response to comment BJ57.

Comment MuK 66

Mine Plan, Addendum MP-3 Groundwater Model, 66. Page Addendum MP-3-33 states, "Recharge is applied within the modeling software by applying the recharge to the highest active layer." Please clarify the presence of any modeled 'dry cells' in the model and the influence of applying the recharge to the layers below the dry cells. (MK)

Response MuK 66

As noted in the responses for comments MuK 59 and MuK 60, Groundwater Vistas does not allow for discontinuous layers across the model domain. Along the north and

the west sides of the model there is a good portion of the model domain where the upper layers have been eroded off and do not actually exist. These areas of erosion were accounted for using no flow cells. As shown on Figures 4.4-1 through 4.4-4 of Addendum MP-3, the no flow cells in the top layer are the largest in areal extent while each underlying layer has a slightly decreased areal extent of no flow cells. In this case the no flow cell distribution was adjusted to match the outcrop of each layer. The fact that the software applies the recharge to the highest active layer was taken advantage of during the modeling process, since it is an effective way to apply recharge to an outcropping layer which is under another layer that is eroded away but due to software limitations is still present in the model.

Because CBM operations have generally removed most of the water from the coal seams, there are some locations within the model domain where dry cells during the modeling have caused cells in layer 1 to go dry and the recharge is applied to the next active layer below. While this could be problematic if a high recharge rate were assigned to the model cells, generally throughout the model domain the recharge rate is very low. Therefore, this results in a very minor amount of water coming into the model and did not significantly affect the model calibration.

Comment MuK 67

Mine Plan, Addendum MP-3 Groundwater Model, 67. Table 4.2-3. lists model porosity values. Typically, MODFLOW (flow model) does not use porosity in its calculations. Please clarify the need for this input parameter. (MK)

Response MuK 67

Modflow does not utilize porosity as part of its calculations. However, other modules included in the Groundwater Vistas package such as MODPATH do utilize porosity. In the case of this model, no MODPATH simulations were conducted. Therefore, the porosity term as put into the model has no impact on the calculations. However, porosity is a hydraulic parameter of the aquifer and may be important for future modeling simulations, therefore, the porosity values developed for each aquifer/aquitard unit will be left in the model report. Minor changes to the text in Addendum MP-3 have been made to clarify the role of porosity in this model.

Comment MuK 68

Mine Plan, Addendum MP-3 Groundwater Model, 68. The faults are not modeled in Layer 1. Please clarify the procedure for determining the vertical extents of the faults in the model. (MK)

Response MuK 68

The composition of Layer 1 is predominately claystone. Because Layer 1 is not composed of aquifer material and because the hanging and footwalls are composed of

strata with similar hydraulic properties, displacement due to faulting does not substantially change the flow through the aquitard and placing Horizontal flow barriers in the model in layer 1 was not necessary.

Comment MuK 69

Mine Plan, Addendum MP-3 Groundwater Model, 69. Please provide the input parameters used to model the horizontal flow barriers in the model and discuss their technical reasonableness. (MK)

Response MuK 69

Horizontal Flow Barriers were used in the model to simulate no-flow boundaries created by faulting within the project area. Horizontal flow barriers require two input parameters in Groundwater Vistas including wall thickness and hydraulic conductivity. The input parameter used in the model for wall thickness was 10 feet and a hydraulic conductivity of 1.0 x 10^-5 ft/day was used. The horizontal flow barrier parameters as applied will essentially limit all but a very minor amount of flow across the barrier. As described in the response to comment MuK 51, the coal seams within the project area are relatively thin as compared to the fault offsets so it is reasonable to assume that the faults will significantly impede flow in the aquifer units.

Comment MuK 70

Mine Plan, Addendum MP-3 Groundwater Model, 70. Page Addendum MP-3-40 states, "As the current, post-CBM potentiometric surface is considered the static level……." Please provide the implications of this assumption, on the model calibration of hydraulic parameters and the mode predicted hydrologic impacts (over estimation of drawdown vs. underestimation) (MK)

Response MuK 70

Addendum MP-3 Sections 4.8.1, 4.10, and 4.11 all discuss the implications of CBM impacts. In addition, the response to comment MuK 53 also discusses CBM impacts to water levels. As discussed in the response to comment MuK 53, the model conservatively assumed that CBM operations have lowered the water levels in the eastern portion of the model domain to a level near the top of the coal seams. To simulate this drawdown, the elevations of each general head boundary on the east side of the model were set at an elevation just above the top of the coal seam. The general head boundaries elevations remained the same in both the steady state and the transient models. Essentially, this means that the model operated under the assumption that the post CBM impacts were permanent prior to and after the Brook Mine mining activities.

The assumption that the water levels have been permanently impacted by CBM did have a significant impact on model calibration. The severely depressed water levels

caused by CBM operations have resulted in a large number of cells going dry. The hydraulic parameters of the aquifer units within the eastern portion of the model domain were not adjusted to eliminate the dry cells since it is reasonable to assume that, with the severe drawdown modeled, the coal seams could have been dewatered in these areas. Therefore, even though the effects of the CBM drawdowns were observed during calibration, no specific adjustments were made to the modeled aquifer characteristics to eliminate these impacts. The dry cells did complicate calibration of the model because they cause instability in the MODFLOW model calculations and results.

The model was developed to take into account impacts from the combined effects of CBM and the proposed coal mining. In general, CBM development impacts are significantly larger than the predicted impacts from the Brook Mine. Therefore, ignoring CBM impacts would have significantly under predicted the potentiometric surfaces within the model domain and overestimated the impacts that Brook Mine would have on the system.

Many of the CBM wells are actively being plugged and abandoned. If this trend continues, there is a chance that recovery of water levels from CBM impacts may begin which will result in recharging of the coal seams. If this happens, it is anticipated that the model conservatively over predicts the impacts to the region especially in the long term recovery scenarios.

Comment MuK 71

Mine Plan, Addendum MP-3 Groundwater Model, 71. It is noted that Table 4.7-1 summarizes the calibration residuals and statistics from the calibrated model. Please consider providing additional presentations of the calibrated model statistics. This will enable an easier evaluation of any spatial bias in the model calibration. (MK)

a. X-Y plot of observed vs. simulated water levels.

b. A map plotting the residuals to show the spatial distribution

c. Provide a summary statistics table with Mean Error, Mean Absolute Error, Sum of Squared residuals for the calibrated model. It is noted that some of these values are presented in the sensitivity analysis. However, a compiled summary statistics table would be very helpful.

Response MuK 71

As requested the following additions have been made to the groundwater model report:

A. An X-Y plot of observed versus simulated water levels has been added in the report as Addendum MP-3 Figure 4.7-1.

B. The residuals have been added to figures 4.7-2, 4.7-3, and 4.7-4 of Addendum MP-3.

C. Table 4.7-1 of Addendum MP-3 has been updated to include additional statistics.

Comment MuK 72

Mine Plan, Addendum MP-3 Groundwater Model, 72. In addition, to the measured water levels, please clarify if there were any flow measurements used for model calibration. (MK)

Response MuK 72

There are no areas within the model domain where it was possible to collect any flow measurements that would support the modeling effort therefore, no flow measurement were used in the calibration.

Comment MuK 73

Mine Plan, Addendum MP-3 Groundwater Model, 73. Please provide a water budget table (in acre-feet per year or cubic-feet per day) showing all the inflows into the model and outflows from the model.

Response MuK 73

The following tables summarizes the inflows and outflows from the model domain during the steady state period, 5 years into mining, the end of mining, and at the end of recovery.

Mass Balance of Steady State Calibrated Model		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
General Heads	16,107	22,890
River	2,569	410
Drains	-	560
Recharge	5,168	-
Total	23,846	23,860

Mass Balance 5 years into Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	12,496	11,431
General Heads	16,130	22,904
River	2,688	385
Drains	-	1,774
Recharge	5,434	-
Total	36,749	36,494

Mass Balance End of Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	3,670	4,146
General Heads	16,135	22,902
River	2,705	365
Drains	-	532
Recharge	5,430	-
Total	27,941	27,945

Mass Balance End of Recovery		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	1,698	2183
General Heads	16,138	22,901
River	2,714	363
Drains	-	535
Recharge	5,427	-
Total	25,978	25,983

Comment MuK 74

Mine Plan, Addendum MP-3 Groundwater Model, 74. Please provide a comparison of model simulated inflows and outflows against conceptual estimates of inflows and outflows. This comparison will act as another verification/check for the technical adequacy of the groundwater model (Example model GHB flows vs. reasonable estimated conceptual flows). (MK)

Response MuK 74

Response to comment MuK 73 includes tables that show the inflows and outflows from the model during the steady state period, 5 years into mining, the end of mining, and at the end of recovery. The five main categories of inflows and outflows include 1) storage, 2) general head boundaries, 3) river boundaries, 4) drains, and 5) recharge. Following is discussion regarding model predicted inflows and outflows for each category:

1) Storage – During the steady state model there is no inflow or outflow from storage so storage is not included in the first mass balance table in prepare for comment MuK 73. The model predicts that during active mining more water will come out of storage than will go into storage. Conceptually this is reasonable since during mining, water from the coals would be draining into the mined out areas. There is a trend of water continuing to come out of storage even after mining ceases. Even though the volume of water coming out of storage is quite low, it is contrary to the conceptualization of the system to have water leaving storage after mining because at this point water should be going back into storage. This phenomenon is attributed to the fact that many of the

cells in the model go dry during mining because CBM operations have significantly dewatered the coals and there is not much water available in storage (see comment MuK 70). When the cells go dry, MODFLOW treats them as no flow areas and there can be a ripple effect that causes additional cells going dry. Since MODFLOW is not very efficient at rewetting dry cells when they should be resaturated, this ripple effect has caused permanent changes in the model. Over a long time the model would be expected to come to a steady state condition. The tables prepared in response to comment MuK 73 indicate that even at the end of recovery, the model is not yet at the new equilibrium that would eventually be reached with the additional dry cells.

2) General Head Boundaries – The amount of water going into and out of the model domain via the general head boundaries remains relatively consistent throughout the modeled operations. This is reasonable because the general head boundaries are a long distance from the mining area and would not be expected to be significantly impacted by mining. In addition, the total volume of outflows from the general head boundaries generally balances the inflows from other sources. This is conceptually correct.

3) River Boundaries – The conceptual inflow and outflow from the coals to the Tongue River are discussed in detail in comment MuK 56. Groundwater Vistas does apply the River Boundary cells to the bottom of the layer in which they are inserted. The Tongue River Boundary cells were inserted into the model up to the point where Goose Creek joins the Tongue River. At that location the top of the Carney coal is estimated to be approximately 100 feet below the surface. Since the alluvium is generally much thinner in this area and there is actually a large amount of low permeability strata between the Tongue River alluvium and the coal (described in comment MuK 56), the model likely overestimates the contribution of the River boundary cells to the model because the river boundary cells provide a direct connection (in the model) between the river and the coals where there is not a physical connection. This conservatively over estimates how much water discharges from the River Boundary Cells to the model.

4) Drains – One drain was placed into layer 1 in the northeast side of the model domain to allow water to drain from the model where the Tongue River crosses the domain boundary. This represents the amount of water in layer 1 lost to the surface water system. The total discharge from this drain during steady state conditions is 560 ft^3/day (2.9 gpm). While no physical measurements were (or can be) made to verify this amount, conceptually it is reasonable. The strata along the Tongue River likely does discharge a small amount of water to the River where it cuts through the numerous perched sand lenses that become saturated from natural recharge. There is no evidence of large groundwater discharges to the Tongue River in this area so it makes sense that a small

discharge to the River (rather than a large discharge) would be observed in the model. During mining, drains were added to the model to remove water from the mine pits. The tables indicate that during mining the discharges from the drains do increase as expected. After mining is complete, discharges from the drains return approximately to premining levels which is conceptually correct.

5) The recharge amount used in the model stays at relatively the same level throughout the simulations. Total recharge across the model area is approximately 28 gpm. As is described in comment #65 the recharge rates are reasonable based on available studies.

Comment MuK 75

Mine Plan, Addendum MP-3 Groundwater Model, 75. Page Addendum MP-3-40 states, "Due to a system of thin aquifers with similar sources and sinks and homogeneous hydraulic conductivities, the head values of the steady-state model were nearly identical between the separate coal layers as noted in Table 4.7-1." Please clarify whether this statement implies that the interburden (where present) between the coal seams is not a confining unit. (MK)

Response MuK 75

This statement is an observation only based on review of modeled values and does not suggest a lack of confinement exists. Pumping tests conducted in separate aquifers demonstrated that the interburden provides confinement between the Carney and Masters aquifers as described in Section D6-8.3.2.3 of Appendix D6. In addition, Table 4.7-1 of Addendum MP-3 shows that at each cluster where both coal seams contained measureable water, the difference in measured water levels between the coal seams was higher than the modeled difference. This suggests that the vertical hydraulic conductivity assigned to the interburden in the model may be higher than the actual hydraulic conductivity of the interburden in the field. The use of a higher hydraulic conductivity for the interburden in the model will overestimate the drawdown in the other coal seam therefore, the predicted drawdown will be conservative.

Comment MuK 76

Mine Plan, Addendum MP-3 Groundwater Model, 76. In figures 4.7-1, 4.7-2 and 4.7-3, please consider including the observed/interpreted water level contours and the measured water level elevations. This will enable to visually evaluate the observed vs. simulated water levels. (MK)

Response MuK 76

Figures 4.7-1, 4.7-2, and 4.7-3 of Addendum MP-3 have been updated to include both observation wells and observed elevations as well as observed potentiometric contours.

Please note that in response to Comment MuK 71 an additional figure was added to this section (Figure 4.7-1) and these figures have since been renumbered to 4.7-2, 4.7-3, and 4.7-4.

Comment MuK 77

Mine Plan, Addendum MP-3 Groundwater Model, 77. Page Addendum MP-3-45 states, "…….and if CBM production ceases, recovery rates will likely be higher than estimated in the model." Please clarify if this statement implies that currently, there are CBM wells that are operational in the area and are pumping out groundwater. (MK)

Response MuK 77

Although substantially less than past years, some CBM wells in the area are still producing groundwater. Since CBM production has been ongoing for the last 15+ years the CBM operations have significantly lowered the water levels in the coals as is noted in the report. Records of groundwater withdrawals can be found on the Wyoming Oil and Gas Conservation Commission's (WOGCC) online database at: wogcc.state.wy.us. According to WOGCC records there has been no groundwater production associated with CBM in Townships 57 and 58N Range 84W since 2012. However production is still occurring in Townships 57 and 58N Range 83W as well as Township 56N Range 83 and 84W. The portions of the model domain where CBM production may occur are located in Townships 56 and 57N Range 84W.

Comment MuK 78

Mine Plan, Addendum MP-3 Groundwater Model, 78. Please consider removing the model sensitivity to storage coefficients and porosity. Steady state groundwater model equations do not include these parameters in any of the model calculations. (MK)

Response MuK 78

As noted in this comment, the final model did not include a transient calibration and a sensitivity analysis on storage coefficient and porosity is not appropriate. The section and discussion regarding model sensitivity to the storage coefficient and porosity has been updated and removed as appropriate.

Comment MuK 79

Mine Plan, Addendum MP-3 Groundwater Model, 79. Please clarify if the faults in the model and their parameters were considered in any of the sensitivity analyses. If not, please consider performing a detailed and thorough sensitivity analysis, as the faults appear to influence the drawdowns simulated by the groundwater model. (MK)

Response MuK 79

The faults do influence the drawdowns and flow patterns simulated in the groundwater model. However, as noted in the response to comment MuK 51 the displacement observed in the faults roughly 5 times as thick as the modeled coal seams. Given the fact that the dominant lithology in the area is low permeability claystone/siltstone, it is very likely that where faulting has occurred the displacement has resulted in coals being immediately adjacent to the low permeability strata. Therefore the faults are assumed to be hydrologic barriers to water flow. Based on the best available mapping, these faults have been placed into the model. Because the faults are physical parameters that were developed along with development of the geological model (i.e. elevations and thicknesses of the geological layers), a sensitivity analysis was not performed on the faults.

Part of the reason that the faults influence the groundwater responses in the groundwater model to the degree that they do is because of the CBM impacts. Because the CBM operations have significantly lowered the water levels in the coal seams, the faults create a shadow effect that results in many of the cells immediately downstream of the faults going dry. If there had not been any CBM dewatering operations performed in the coals, the water levels would be significantly higher and the effects of the faults would not be as pronounced.

Comment MuK 80

Mine Plan, Addendum MP-3 Groundwater Model, 80. In addition to the simulated drawdown maps, please consider providing hydrographs at strategically selected locations. This will enable a better presentation of the impacts over time. (MK)

Response MuK 80

As suggested, Appendix A has been added to Addendum MP-3 which depicts the modeled water elevations during the model simulation period at all the water supply wells identified within the model domain (CBM wells excepted) and at selected alluvial target locations within the model domain.

Comment MuK 81

Mine Plan, Addendum MP-3 Groundwater Model, 81. Please clarify if the three wells listed in Table 4.9-1 are the only wells considered for the analysis. Also, provide a discussion on the methodology to narrow down the analysis from several wells shown in the groundwater rights maps to these three wells. (MK)

Response MuK 81

Additional wells beyond those originally presented in Table 4.9-1 were considered in the analysis. Table 4.9-1 has been updated to include all the wells considered in the analysis. To determine which wells were included in the analysis, completions were

compared to modeled surfaces to estimate which formation in which the well was completed. Those thought to be completed in the Carney/Masters sequence were included. Please note that the wells included in Table 4.9-1 error on the side of being over inclusive. Some of the wells are believed to be completed in multiple zones but the analysis assumes that they are only completed in the coal seams of interest. In addition, the well depths were determined based on the State Engineer's database and in many cases well depth data was left blank or was questionable. If there was a question whether a well was actually completed in the coal aquifer of interest the well was assumed to be completed in the coal. Therefore, the well list may include some wells that are not completed in the coals of concern.

Comment MuK 82

Mine Plan, Addendum MP-3 Groundwater Model, 82. Please provide (or reference) a discussion about the three wells listed in Table 4.9-1, their depths, screened intervals and other pertinent information. (MK).

Response MuK 82

Table 4.9-1 has been updated to include total depth as well as the screen intervals for all the wells. Additional details on the wells can be found in Adjudication Appendix B.

Comment MuK 83

Mine Plan, Addendum MP-3 Groundwater Model, 83. Page Addendum MP-3-60 states, " To measure the impacts to the Tongue River and Goose Creek, a series of targets were placed along these drainages in Layer 1" Please define the term target. Also, clarify if these targets are located in the alluvial aquifer. (MK)

Response MuK 83

The targets as used in Groundwater Vistas are simply locations where heads are measured and compared with measured heads (if there are any available). Ground Water Vistas generates a hydrograph throughout the transient period of mining and recovery for each target. These targets were placed in Layer 1 to estimate the impacts of mining to surface water bodies. These targets are located where the alluvial aquifer is simulated in Layer 1. Targets representing existing well locations were also put in layers 4 and 6 as well as discussed in Comment MuK 81.

Comment MuK 84

Mine Plan, Addendum MP-3 Groundwater Model, 84. Page Addendum MP-3-60 states, "These targets demonstrate that the estimated maximum impact to Tongue River Alluvium is conservatively estimated to reach 2.5 feet drawdown near the river." Please expand the discussion on the impacts to surface water flows including translating the

drawdown to an estimated decrease in the groundwater baseflows to Tongue River and Goose Creek. (MK)

Response MuK 84

As shown on the hydrographs included in Appendix A, the maximum water level decline of 2.5 feet to the Tongue River alluvium occurred permanently and was caused by dry cells. This 2.5 foot drawdown is not believed to be a real drawdown because it resulted from model instability rather than a real predicted result. If the model did not have dry cells that caused permanent changes in the model, the maximum drawdown due to mining is estimated to be less than 0.5 feet.

As noted in the response to comment MuK 56, the model estimates the coals will contribute a relatively insignificant amount to water to the base flow of the Tongue River. As noted in Comment MuK 73 in the steady state model the River contributed approximately 2,569 cubic feet per day to the model while the river received 410 cubic feet per from the model. The net result is that in the steady state model 2,159 cubic feet per day (11.2 gpm) was contributed from the river to the model. For comparison, at the end of mining, the River contributed 2,714 cubic feet per day to the model and received 363 cubic feet per day from the model. The net result at the end of mining was that 2,351 cubic feet per day (12.2 gpm) was contributed from the River to the model. Over the simulated mining period the model estimates that the increased contribution of flow from the River to the model will be 1 gpm which represents approximately a 9% increase in flow.

Please note that in Groundwater Vistas the river boundary cells go to the bottom of the layer which likely overestimates the impacts to the River. Within the eastern portion of the model domain the coal aquifers can be 200 or more feet below the level of the river while the Tongue River Alluvium is estimated to be between 15 and 30 feet thick based on the thickness of alluvial wells constructed by Big Horn Coal in the area. Therefore, within the eastern portion of the model domain, the coals may be significantly below the alluvium and no River boundary was included in this portion of the model. However, there is an intermediary region where the actual level of the River is some 30-70 feet higher than the coals. At these locations the River boundary cells were left on to conservatively show the impacts to the river. However, the alluvium in these areas is likely thinner than 40-70 feet. As a result, the model allows the River to directly contribute water to the coals below and the model is expected to overestimate the impacts to the Tongue River in these locations.

Comment MuK 85

Mine Plan, Addendum MP-3 Groundwater Model, 85. Please provide a statement on any hydrologic impacts predicted by the groundwater model to areas outside the Brook mine permit boundary. (MK)

Response MuK 85

The only impacts outside of the Brook Mine Permit Boundary would be observed at the existing water supply wells. Table 4.9-1 describes the estimated impacts at all the water supply wells in the Model domain that will be impacted both inside and outside of the Brook Mine Permit Boundary. Please note that most of these wells are located outside of the Brook Mine permit boundary. As shown on Table 4.9-1 the largest model predicted impact seen at any existing well outside of the Brook Mine Permit boundary is 20 feet which would be observed at P48251W. As shown in the hydrograph for this well in Addendum MP-3 Appendix A, this impact is estimated to be short lived (approximately 4 years). Model predicted drawdowns at the rest of the wells are less than 5 feet. At many of the wells predicted drawdowns are less than 1 foot over the life of the mine.

Comment MuK 86

Mine Plan, Addendum MP-3 Groundwater Model, 86. Please provide a discussion on the simulated impacts caused by mining to surface water – groundwater interaction within the model domain. (MK)

Response MuK 86

Please see the response to comment MuK 84.

Comment MuK 87

Mine Plan, Addendum MP-3 Groundwater Model, 87. Please compare the model simulated water balance between pre-mining, during mining and post mining conditions. Consider including a table that presents the water balance during select periods showing the flows from all sources and discharges to all the sinks within the model domain. Provide a detailed discussion addressing any changes in the model simulated water balance between pre-mining, during mining and post mining conditions. (MK)

Response MuK 87

Please see responses to comments MuK 73 and MuK 74. A detailed discussion is included in the responses to these comments.

Comment MuK 88

Mine Plan, Addendum MP-3 Groundwater Model, 88. In addition to the maps presented on the recovery estimates, please provide hydrographs at strategically selected locations. This will enable a better presentation of recovery over time. (MK)

Response MuK 88

As described in response to Comment MuK 80, an appendix (Appendix A) has been added to Addendum MP-3 which depicts the modeled water elevations at a number of well and target locations within the model domain.

Comment MuK 89

Mine Plan, Addendum MP-3 Groundwater Model, 89. The modeling documentation lacks discussion on the backfill aquifer. In the recovery model, please clarify how the model treats the backfill aquifer (spoils aquifer) and its resaturation. Please provide a discussion (or reference) to the hydraulic properties of the backfill materials used to create the backfill aquifer and the aerial extent of the backfill aquifer. (MK)

Response MuK 89

Mine Plan Section 4.10 discusses the backfill aquifer. Within the areas where the highwall miner is used for mining, an open cavern will be left behind. Unless the mined out areas collapse, the backfill aquifer is essentially an open cavern with 100% porosity. The modeling software used for this effort does not have the ability to transiently change aquifer properties, and during resaturation of the mined areas the assigned storage coefficients remained the same as the original aquifer properties. As a result, the model may underestimate the time that it takes for the aquifer to resaturate where the mining methods have increased the porosity and thereby resaturation volume. Inversely, in the slots mined with traditional open cut mining techniques, coal will be removed and replaced with overburden material. In these locations the backfilled material is expected to have poor aquifer characteristics because it will primarily be a mix of fine grained clay and silt with some sand. In these areas the aquifer will essentially be removed. Again, the modeling software does not have the ability to transiently change aquifer properties and this effect was ignored during the modeling.

Figure MP-3-4.9-1 shows the areal extent of mining and Addendum MP-3 Figures 4.7-2, 4.7-3, and 4.7-4 depict the areas that were modeled as dry within the Brook Mine permit area. It is important to note that a large percentage of the area that will be mined is dry prior to the initiation of mining. In addition, figures in MP-3 Section 4 show that after mining, some of the areas go dry and do not rewet. In the areas where slots are excavated this prediction is reasonable because the backfill will act as an aquitard with poor aquifer characteristics. A layer by layer review of the mined area at the end of mining was conducted to determine conceptually how ignoring the changes in the coal porosity and changes in backfill material may have impacted the model predictions.

Upper Carney-With exception of a very small portion of mine block 9 (Figure MP-3-4.9-1). The entire Upper Carney coal is unsaturated. Therefore, there is no resaturation and no recovery. The model estimates are appropriate for the Upper Carney coal.

Lower Carney - Most of the mine blocks as well as the open slots are dry in the Lower Carney at the end of mining. Only mine blocks 1, 2, 5, 9, and 10 had substantial portions that were saturated. As a result, the potential error created by transient aquifer properties in model predicted resaturation rates to the underground mined coal blocks in the Lower Carney coal, if any, is expected to be very low. With the exception of the slots cut to mine blocks 5, 9, and 10, all of the slots cut to mine the Carney Coal will also be dry; therefore, resaturation at those locations will not substantially impact model predictions. The slots cut for blocks 9 and 10 generally run parallel to the direction of water flow. If the coal in these locations is completely removed and replaced with an aquitard, the impact to the aquifer will be minimal because water will simply flow around the portion of the backfilled aquifer. The open pit slot cut adjacent to mine block 5 does run perpendicular to the direction that water is flowing and may change the groundwater flow patterns in this area. However, the location of the slot is near the groundwater divide caused by the fault just to the south. Therefore, this slot is not expected to substantially impact groundwater flows either

Masters - Most of the Masters Coal mine blocks are saturated. Only blocks, 4, 5, 6, and 7 have substantial areas that are not saturated. In the mine blocks where underground mining techniques are employed the model may underestimate the time it takes for resaturation to occur because the storage coefficient is not updated to account for the increased porosity of the mined out block. However this resaturation time will be balanced out by the fact that there will be no aquifer replaced in the open cuts to resaturate, and thus these areas would not resaturate as the model predicts. With the exception of the open cut for mine block 5, all of the open cuts are oriented so that they will have minimal impacts on the natural flow gradients in the wellfield or are located within or adjacent to dry areas. As previously noted, the open cut near mine block 5 is located adjacent the drainage divide so it will not significantly change the water flow within the aquifer.

Due to the fact that much of the mined area is dry, the actual area mined that is below the water table is relatively small, and that the open cuts are oriented such that they have minimal impacts to groundwater flow, the recovery analysis performed by the model is reasonable. Also, as noted, the areas where underground mining is employed and the model overestimates the rate at which the aquifer is resaturated are counterbalanced by the areas of open cuts where the aquifer will not be replaced and the model underestimates the time it takes for the strata to resaturate.

Comment MuK 90

Mine Plan, Addendum MP-6 Subsidence Control Plan, 90. Figure MP6.1-1 shows "Monarch Seam Surface Only Mining". Please clarify if the Monarch seam is targeted for mining in the appropriate sections of Appendix D5, Appendix D6 and mine plan. (MK)

Response MuK 90

The appropriate sections of Appendix D5 and D6 have been updated.

Reclamation Plan

Comment BJ 57

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-37, The narrative describes the sources of recharge to the coal seams. One lithology mentioned as a positive recharge contributor is the overlying burn, scoria, or clinker material, generated by coal fires. It is a common misunderstanding that the scoriaceous material recharges coal or overburden. It would appear, at first glance, that the broken, vuggy material would be capable of conveying large amounts of water from the surface to materials beneath. That is not the case, however, as the coal/scoria interface has a zone of partially metamorphosed coal ash that lies between the burned material and the remnant coal. I have seen this zone many times during my 25 year career in the coal mines when supervising coal and overburden removal. This zone is characterized by a white to light gray, clay band that ranges in thickness from 6 inches to a foot or more. It is the same high silica ash found in the bottom ash of the local power plants that burn PRB coal. This ash band acts as an aquaclude, preventing water from entering or escaping the coal. Because of this, any recharge models that were run using the scoria as a recharge source must be reevaluated using new layers that do not include the scoria. Rerun recharge models if needed.

Response BJ 57

It is true that the partially metamorphosed coal ash layer between the coal and the scoria has the potential to limit recharge from the scoria to the coal. However, even though the permeability of this layer is low, there will be areas where the coal has collapsed or other geologic variances such as a thinning section which will allow for water from the scoria to come into contact with the coal. Therefore, even though the scoria may not be directly in contact with the coal, there is still a recharge component to the scoria, albeit; significantly lower than if the scoria and coal were in direct contact. This low recharge rate is reflected in the groundwater model. The calibrated recharge rate used in the groundwater model for the areas covered by scoria was 0.35 inches per year. For comparison purposes, the recharge rates assigned to the Carney and Masters outcrops, where no scoria was present, varied from 0.2 to 0.88 inches per year. Considering that in the scoria areas a very large percentage of direct precipitation is expected to infiltrate into the scoria, the 0.35 inch per year recharge rate represents a significant reduction in the amount of water available (which could be upwards of 10 inches per year) to infiltrate into the coal seams. Therefore, the calibrated recharge rate included in the groundwater model does take into account the low permeability layer between the coal and the scoria.

Comment BJ 58

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-39, The second sentence in the first paragraph has an odd, difficult to understand syntax. Please rewrite the sentence for clarity.

Response BJ 58

Revised page RP-39 text as requested. The sentence will now read "The mine will consult with WDEQ/LQD to determine the number of spoil wells that will be tested".

Comment BJ 65

EXHIBITS, Reclamation Plan, Exhibit RP.6-1, The permit boundary on this map is inaccurate. Please recreate the permit boundary layer.

Response BJ 65

Revised Exhibit RP. 6-1 as requested.

Comment BJ 66

EXHIBITS, Reclamation Plan, Exhibit RP.8-3 and Exhibit RP.8-4, The post mining potentiometric surfaces for the Carney and Masters beds are suspended in mid-air over Slater Creek. Please terminate the contour lines at the outcrop or use a dotted line to indicate the calculated potentiometric surface.

Response BJ 66

Revised Exhibit RP.8-3 and RP.8-4 as requested.

Comment DS 24

Reclamation Plan, Section RP.4. This brief section discusses what is considered spoil material to be removed during mining. The section states that spoil does not include coal, but there are some very narrow coal seams with numerous stringers of clay or of such low quality that will probably not be mined and will be placed in backfill. Also, the top layers of most coal seams are quite "dirty" and would also be removed and backfilled. In order to provide the readers with a more accurate description of the mining and reclamation processes, please revise the text to show that some coal-laden materials will also be considered spoils and will be backfilled during reclamation.

Response DS 24

Revised text as requested.

Comment DS 25

Reclamation Plan, Section RP.5.2. Please provide a description of the methods used to control topsoil depth during replacement. Most mining operations use stakes with surveyed marks as guides for controlling soil application depths.

Response DS 25

See Section RP.5.4 for a description of the methods used to control topsoil depth during replacement.

Comment DS 26

Reclamation Plan, Section RP.5.4. Variability in topsoil depth cannot be avoided due to limitations imposed by the equipment used and the pre-application preparations which may include ripping of the compacted overburden surface. Typically, the depth of topsoil application may vary 25%, but the average depth should be closely monitored and should not exceed the average availability. Also, because some soils exhibit unsuitable characteristics and will not be used for reclamation, discussion of the use of substitute topsoil materials is warranted in this section.

Response DS 26

Revised text as requested. Added discussion about substitute topsoil being an option if not enough suitable topsoil is salvaged.

Comment DS 27

Reclamation Plan, Section RP.5.6. Sediment control measures will be required to prevent untreated runoff from exiting reclaimed lands onto adjacent native lands. Please provide a discussion of the sediment control measures to be used.

Response DS 27

Revised text as requested.

Comment DS 28

Reclamation Plan, Section RP.8.2. This section states only that impoundments will require Landowner, LQD and SEO approval. Prior to construction of post mining impoundments, SEO approved plans for the impoundments must be submitted for inclusion in the permit Reclamation Plan. Please include a statement that a Reclamation Plan revision will be approved by the LQD prior to construction of impoundments.

Response DS 28

Revised Section RP.8.2 to include a statement regarding LQD approval before the construction of postmine impoundments.

Comment DS 29

Reclamation Plan, Section RP.11.1. The primary final land use for the permitted acreage will be grazing and wildlife. Only areas where the current use is industrial will remain industrial land uses after mining is completed. Therefore, in order for any constructed buildings or railroad access to remain following mining, and a permit revision to change the land use will be required. It is not just a matter of demonstrating usefulness to the LQD and receiving landowner consent. This will be a major revision to the permit that will require public notice. Clarification should be provided concerning the steps involved to allow building to remain.

Response DS 29

Revised text as requested. Eliminated discussion in Section RP.11 regarding leaving any buildings, facilities, and equipment following completion of mining.

Comment DS 30

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30

See Mine Plan MP.1.6 for a description of permit terms and initial year. Revised text in Reclamation Plan Section RP.13 to reference Mine Plane MP.1.6. Revised Exhibit RP.5-1 adding "Note: Year 3 corresponds to the year 2019" in Legend.

Comment DE 19

Reclamation Plan, Section RP.5.1, page RP-6 – RAMACO states that the contoured surface will be scarified or ripped, if necessary. The mine should commit to scarifying or ripping all surfaces prior to topsoil replacement.

Response DE 19

Revised text as requested. Remove "if necessary" from sentence.

Comment DE 20

Reclamation Plan, Section RP.5.6, page RP-8 - The 1st sentence of the 2nd paragraph doesn't make sense. Please correct.

Response DE 20

Revised text as requested. The sentence now reads "Rills and gullies occurring in redistributed soil precluding the achievement of the approved postmining land use or the reestablishment of vegetative cover will be rectified".

Comment JJ 5

Reclamation Plan, 5. Exhibit RP 6-1 also displays permit boundary discrepancies in regards to the section lines on it and those located on the Adjudication Exhibit 1. Please update accordingly.

Response JJ 5

See response to comment BJ 65. Revised Exhibit RP.6-1 as requested.

Comment JJ 6

Reclamation Plan, 6. Table RP 6-1 states that there are 11.6 acres of wetlands and other aquatic resources. Please discuss where these acres are to be reclaimed and show them on the Exhibit RP. 6-1 which displays the reclaimed vegetation communities and their locations.

Response JJ 6

Revised Section RP.9 to include reference to Exhibit RP.6-1 for location of reclaimed wetlands and OAR. Revised Exhibit RP.6-1 to include reclaimed wetlands and OAR locations.

Comment MK 24

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, Assuming the Tongue River is an AVF, this section should discuss how the essential hydrologic functions will be maintained and/or reestablished, as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(ii). As noted in Comment No. 21, the essential hydrologic functions of the Tongue River AVF need to be identified and a monitoring system needs to be installed. (MDK)

Response MK 24

Revised text as requested in Section RP.10.

Comment MK 25

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 25. As noted in Comment No. 21, the adjacent Goose Creek AVF also needs a monitoring system to demonstrate essential

hydrologic functions are maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 25

Revised text as requested in Section RP.10.

Comment MK 26

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 26. This section may also need to be addressed if the LQD finds that other AVFs exist on or near the permit area. If AVFs are determined to be present, the essential hydrologic functions must be maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 26

Revised text as requested in Section RP.10.

Comment MK 75

Reclamation Plan, Section RP.3.3 Postmine Slope Analysis, 49. Please provide a discussion that compares the pre-mine vs. post-mine slope characteristics. A table would be helpful that compared the minimum, maximum, and average slopes under pre-mine and post-mine conditions. (MDK)

Response MK 75

Added Table RP.3-1 comparing premining and postmining slopes. Updated Section RP.3.3 of text to include reference to the new table.

Comment MK 76

Reclamation Plan, Section RP.3.5 Drainage Reestablishment, 50. It is stated that mining will disturb portions of the Slater Creek channel and the reclamation will entail reconstruction. However, the Mine Plan PHC (Section MP.6.1) stated that Slater Creek "will still flow naturally around the trench", and "Because Slater Creek's flow will not come into contact with mining activities, no impact will be made to water quality". Please provide a clear and explicit description of the extent of direct disturbance to the Slater Creek channel. This description should be consistent between the Mine Plan and Reclamation Plan. (MDK)

Response MK 76

As stated in the revised Section MP.6.1 of the Mine Plan, the only anticipated surface disturbance to Slater Creek during mining will be the redirection of the channel

through a culvert under a proposed haul road. No text was edited in response to this comment.

Comment MK 77

Reclamation Plan, Section RP.4.2 Mitigation of Unsuitable Material , 51. Minor channels are defined as ephemeral streams but there is no definition provided for "major channels". Please provide a definition and also illustrate an example of a major channel within the proposed permit boundary that would fit into this category. (MDK)

Response MK 77

Revised text in Section RP.4.2 to provide the definition of major channels.

Comment MK 78

Reclamation Plan, Section RP.5.6 Erosion Control and Conservation Practices, 52. The first sentence of the second paragraph…"Rills and gullies…" needs revised, as it appears to be missing one or more words. (MDK)

Response MK 78

See response to Comment DE 20. Text revised as requested.

Comment MK 79

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 53. The second sentence discusses stockponds possibly being disturbed by mining activities. The Mine Plan PHC did not mention that any existing stockponds would be disturbed by mining activities. If stockponds are to be disturbed by the mining operation, this should be discussed in the Mine Plan PHC. (MDK)

Response MK 79

The text in the Mine Plan PHC has been revised to clarify the disturbance to stockponds within the permit area. Section RP.7.4 has been revised to clarify the anticipated aquatic habitat locations.

Comment MK 80

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 54. The text states that two additional postmine impoundments will be constructed and their location is shown in Exhibit RP.3-1. This Exhibit shows ten permanent impoundments, both on and adjacent to the proposed permit area. Please revise this discrepancy in the text or change the symbology in the Exhibit to clearly show the two permanent post-mine impoundments. (MDK)

Response MK 80

Revised text in Section RP.7.4. to clarify the postmine impoundment locations.

Comment MK 81

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 55. Please add the major stream name labels (Tongue River, Goose Creek, East Fork Earley Creek, Slater Creek, Hidden Water Creek) to Exhibit RP.8-1. (MDK)

Response MK 81

Revised Exhibit RP.8-1 as requested.

Comment MK 82

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 56. Please explain in the text how the postmine drainage basin parameters in Table RP.8-1 were determined. (MDK)

Response MK 82

Revised text in Section RP.8.1 as requested.

Comment MK 83

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 57. The text states that a comparison of drainage basin parameters in Table RP.8-1 and Exhibit RP.8-1 show that the overall hydrologic balance will remain largely unchanged. This conclusion is not obvious from the Table and Exhibit. How similar are the postmine drainage basin parameters to the pre-mine parameters? Which sub-drainages show the largest change from pre-mine conditions? The text needs to include a more thorough discussion to demonstrate to the reader why exactly the postmine hydrologic balance will be unchanged. (MDK)

Response MK 83

Revised text to include reference to Appendix D6 tables and exhibits regarding drainage basin parameters. Minor disturbance and mining methods contribute to the largely unchanged postmine drainage basin parameters.

Comment MK 84

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 58. The text provides no discussion of the comparison between the pre-mine and postmine modelled discharge values. Please provide this discussion so the reader can determine if the differences are minor or major. (MDK)

Response MK 84

Revised text in Section RP.8.1.1 as requested

Comment MK 85

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 59. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section RP.17. (MDK)

Response MK 85

Revised text as requested.

Comment MK 86

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 60. Similar to Comment No. 8 made for Appendix D6, the HEC-HMS runoff estimates in Table RP.8.4 are much higher than the Miller (2003) equations. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) regression equations.

Response MK 86

See response to Comment MK 34. No revisions to the text were made.

Comment MK 87

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, The last sentence in the first paragraph states that stream reaches for which designed cross sections are provided are identified in plan on Exhibit RP.8-1. There is nothing on this Exhibit that shows which stream reaches have designed cross sections, nor which stream channels are being reconstructed. Please clearly identify this information on this Exhibit. (MDK)

Response MK 87

Exhibit RP.8-1 has been revised as requested.

Comment MK 88

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 62. Exhibit RP.8-2 shows that the main Slater Creek channel will not be disturbed. Please consider this in light of Comment No. 50 that requested clarification on the extent of disturbance to the Slater Creek channel. (MDK)

Response MK 88

See response to Comment MK 76(referred to as Comment No. 50). Revised Exhibits RP.8-1 RP.8-2 as requested. A reconstructed Slater Creek (Figure RP.8-9) cross section has been added to reflect the correct disturbance boundary.

Comment MK 89

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 63. On Page RP-35, second paragraph, it references "reclaimed Slater Creek channel" and channel hydraulics are presented in Table RP.8-5. It is not clear why channel hydraulics are presented for Slater Creek when it will not be disturbed. Is this because reclaimed tributaries to Slater Creek are changing such that the main channel of Slater Creek is expected to be change? Please clarify this in the text. (MDK)

Response MK 89

Slater Creek is included Table RP.8-5 to show that the postmine Slater Creek Channel will be hydraulically similar to premine conditions after mining and reclamation operations have been completed as reclamation of a portion of Slater Creek is expected.

Comment MK 90

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 64. It is unclear exactly how many new postmine impoundments will be constructed. Table RP.8-6 identifies two impoundments (Enhancement Stock Pond 1 and Replacement Stock Pond 1), and these are shown in Exhibit RP.3-1. Exhibit RP.3-1 shows eight other permanent impoundments. Please identify if these are new features to be constructed or if they are existing stockponds that may be affected by the mining operation. (MDK)

Response MK 90

The text in Section RP.8.2 has been revised to clarify that only the new features to be constructed are displayed in Table RP.8-6. Affected existing stockponds will be constructed approximately to premine conditions.

Comment MK 91

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 65. Please identify in this section if there will be a net increase or decrease in post-mine water storage capacity relative to pre-mine capacity. (MDK)

Response MK 91

Revised text in Section RP.8.2 to clarify a net increase in water storage capacity is expected due to the addition of two postmine impoundments.

Comment MK 92

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 66. As mentioned Comment No. 47, it is advised that the applicant discuss with the SEO-Interstate Streams Division any implications for the Yellowstone Compact if new water storage features are proposed that potentially decrease water quantity to the Tongue River. (MDK)

Response MK 92

See response to Comment DS 28(Comment No. 47 mentioned above). Revised text as requested.

Comment MK 93

Reclamation Plan, Section RP.8.4.2 Surface Water Monitoring, 67. The text on Page RP-40 states that the surface water monitoring stations are shown on Exhibit RP.8-4. However, the stations are not shown on this Exhibit. It may be make the most sense to add these to Exhibit RP.8-5 and rename the Exhibit "Postmine Hydrologic Monitoring Locations" so the surface water stations and monitoring wells are on one Exhibit. (MDK)

Response MK 93

Revised the reference in text to state "locations of these sites are shown on Exhibit RP.8-5". Exhibit RP.8-5 was revised to include surface water monitoring stations and renamed as requested. Table RP.8-9 was edited to include all planned surface water stations including postmine impoundment monitoring sites.

Comment MK 94

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 68. The text on Page RP-41 states that water quality samples will be collected at each of the postmine impoundments listed in Table RP.8-6 and presented on Exhibit RP.3-1. Please clarify in the text that this sampling list includes all ten impoundments shown. (MDK)

Response MK 94

Revised text in Section RP.8.4.3 to reference Table RP.8-9 and Exhibit RP.8-5 for postmine surface water monitoring sites including postmine impoundments.

Comment MK 95

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 69. Please add the list of impoundments to be sampled to Table RP.8-9 "Surface Water Monitoring Sites". (MDK)

Response MK 95

Revised Table RP.8-9 as requested.

Comment MK 96

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 70. The postmine impoundments to be sampled appears to be slightly different from the impoundments listed in Mine Plan Table MP.7-1 "Operational Surface Water Monitoring Locations". Table MP.7-1 lists three impoundments (Hall Reservoir, Black Mountain No. 1 Stock Reservoir, and Legerski Bros #1 Stock Reservoir) that are not listed as postmine impoundments to be sampled. Please explain why there is a difference in the operational monitoring and postmine monitoring of some impoundments. (MDK)

Response MK 96

Black Mountain No.1 Stock Reservoir has been added as a postmine impoundment that will be monitored. Legerski No. 1 Stock Reservoir and Hall Reservoir are outside of the areas planned for mining disturbance, however in an effort to further monitor the surface water of the Brook Mine permit area, the reservoirs were added to be sampled quarterly during mining. Table RP.8-9 and Exhibit RP.8-5 have been updated to include Black Mountain Reservoir No. 1 Stock Reservoir.

Comment MK 97

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 71. In the second full paragraph on Page RP-41, "The water quality samples.." please also state that the water quality samples will be compared against WDEQ/WQD Class III groundwater standards, as suggested by LQD Guideline No. 17 for replacement and enhancement stockponds. (MDK)

Response MK 97

Revised text as requested in Section RP.8.4.3.

Comment MK 98

Reclamation Plan, Section RP.8.5.2 Surface Water, 72. At the end of the first paragraph on Page RP-44, it predicts a "slight change" in event peaks and volumes. Please further discuss what is meant by a "slight change", i.e., what is the magnitude of the increase or decrease? (MDK)

Response MK 98

Section RP.8.5.2 has been updated to reflect the change in event peaks and volumes will be less than one percent when compared to premining conditions.

Comment MK 99

Reclamation Plan, Section RP.8.5.2 Surface Water, 73. In the second paragraph on Page RP-44, please clarify the extent of direct mining disturbance to Slater Creek versus tributaries of Slater Creek. This comment relates to previous Comments No. 50 and 62. (MDK)

Response MK 99

See response to Comments MK 76 (comment No. 50) and Mk 88 (Comment No. 62).

Comment MK 100

Reclamation Plan, Section RP.8.5.2 Surface Water, 74. Please provide a discussion as to whether the planned postmine impoundments will affect surface water quantity on or downstream of the proposed permit area. (MDK)

Response MK 100

Section RP.8.5.2 has been revised to include discussion of the effect of postmine impoundments to the surface water quantity on and downstream of the proposed permit area.

Comment MK 101

Reclamation Plan, Section RP.9.1 Introduction, 75. The second paragraph references Appendix D8. Should this be Appendix D10 (Wetlands)? Please revise this if necessary. (MDK)

Response MK 101

The reference has been revised to D10 as requested.

Comment MK 102

Reclamation Plan, Section RP.9.1 Introduction, 76. Please add a statement up front in the Wetland Mitigation section that the USACE has not yet issued a jurisdictional determination for the proposed Brook Mine. Please also provide a statement in the text that the information in Section RP.9 may be subject to change pending the USACE determination. The USACE jurisdictional determination should also be incorporated somewhere into the Mine Permit once that is received by the Brook Mine. (MDK)

Response MK 102

Sections RP.9.1 has been revised as requested.

Comment MK 103

Reclamation Plan, Section RP.14 Bond Release, 77. The LQD no longer requires a bond release verification for "sediment control release". This is now termed "surficial stability verification". More information is available in LQD Guideline No. 23. Please revise the text for this change. (MDK)

Response MK 103

The text in Section RP.14 has been revised by removing the reference to sediment control release.

Comment MuK 91

Reclamation Plan, RP 8.5.3 Groundwater, 91. Section 8.3, page RP-38 states, "The estimated Postmine Potentiometric surfaces for the reclaimed aquifer for the Masters and Carney Seams are presented respectively in Exhibit RP.8.3 and Exhibit RP.8-4. Please provide a summary comparing and contrasting the premine potentiometric surfaces vs. post mine potentiometric surfaces. This comparison should also consider any changes in the hydraulic properties (hydraulic conductivity, storativity, recharge capacity) of the premine aquifers vs. post mine aquifers. (MK)

Response MuK 91

Section RP.8.5.3 has been revised to include discussion regarding the comparison of premine and postmine potentiometric surfaces.

Comment MuK 92

Reclamation Plan, RP 8.5.3 Groundwater, 92. Please discuss any changes in the interaction between the surface water and groundwater systems from the premining through the postmining phases of the operation. (MK)

Response MuK 92

The response to Comment MuK 84 describes interaction between the surface water and groundwater systems from the premining through the postmining phases of operation. In general the changes between the surface water systems and the groundwater systems are expected to be minimal. For a short time during mining it is anticipated that there will be a small (less than 6%) increase in the amount of water that recharges the coal seams from the Tongue River. Once the water levels in the coals recover, no further impacts are expected.

Comment MuK 93

Reclamation Plan, RP 8.5.3 Groundwater, 93. Please discuss the intersection of the postmining topographic and potentiometric surfaces and their effects on the location and size of groundwater-fed water bodies. (MK)

Response MuK 93

Revised Section RP.8.5.3 as requested.

Comment MuK 94

Reclamation Plan, RP 8.5.3 Groundwater, 94. Section 8.5.3, page RP-46 states, "These water quality changes can be qualitatively predicted from the overburden mineralogy and projected post mine hydrology." Please expand this discussion on projected groundwater quality. Provide a discussion on the estimated/ projected post mining groundwater quality. A detailed description of potential changes in water quality from flow through backfill/mined out areas should be included. Any potential changes to water quality in adjacent aquifers should be discussed with respect to the potential for offsite material damage. (MK)

Response MuK 94

Revised Section RP.8.5.3 text as requested.

Comment MuK 95

Reclamation Plan, RP 8.5.3 Groundwater, 95. Please provide a discussion on any anticipated water use during the reclamation period. (MK)

Response MuK 95

As discussed in Addendum MP-3, the only anticipated groundwater uses during the reclamation period are at existing water supply wells. Section RP.8.5.3 has been revised to include additional discussion.

Comment MuK 96

Reclamation Plan, RP 8.5.3 Groundwater, 96. Please address (or reference) any expected post-reclamation subsidence effects on the hydrologic system (both quantity and quality) and the plan to minimize these effects. (MK)

Response MuK 96

Section RP.8.5.3 has been revised to include discussion of expected postmine subsidence effects on the hydrologic system.

Comment SP 7

Reclamation Plan, Page RP-13. Section RP.6.2.6. In the last sentence please add that substitutions to the seed mix will be made only with WDEQ approval.

Response SP 7

Revised text in Section RP.6.2.6 as requested, the statement will now read "In the event that seed for primary species is not available, alternatives will be considered which match the life form and morphology of the primary choice only with WDEQ approval."

Comment SP 8

Reclamation Plan, Page RP-16. Section RP.6.4.1. To demonstrate that all of the unaffected acres of each vegetation community are sufficient for an extended reference area please create a table with total acres and affected acres and reference this table in this section.

Response SP 8

Table RP.6-6 has been created to display the number of extended reference acres for the respective vegetation communities. The text in Section RP.6.4.1 has been revised to include a reference to the newly created table.

Comment SP 9

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please add to the Ch. 4 reference in the first sentence on this page that the Handbook of Approved Sampling and Statistical Methods for Evaluation of Revegetation Success on Wyoming Coal Mines.

Response SP 9

Revised Section RP.6.4.1 as requested.

Comment SP 10

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please remove the first sentence in the third paragraph. It appears in conflict with the next sentence which cites Ch. 4.Sec. 2(d)(ii)(B).

Response SP 10

Removed sentence as requested in Section RP.6.4.1.

Comment SP 11

Reclamation Plan, Page RP-19. Section RP.6.4.5.1. Please add a third sentence to the first paragraph to Pastureland land use with a full shrub density greater than 1 shrub/m2 is also eligible.

Response SP 11

Sentence including pastureland land use as eligible added to Section RP.6.4.5.1 as requested.

Comment SP 12

Reclamation Plan, Page RP-24. Please revise the sentence after the ● Shrub density bullet to "Additionally, a species list will be prepared" and delete the remainder of the sentence.

Response SP 12

Revised text as requested.

Comment SP 13

Reclamation Plan, Page RP-25. Section RP.6.7.3. Under Sampling Frequency in Guideline 14 the third sample may be included as part of your revegetation success (bond release) sampling which can begin in year seven. You may add more flexability to your sampling interval such as beginning year 3 or 4, with the second sampling in year 5, 6 or 7 and then the third may be year 7 – 13 and may be used for revegetation success.

Response SP 13

Revised text per recommendations.

Comment SP 14

Reclamation Plan, Page RP-29. Section RP.7.2. There is a reference to RP.8 in this section. Please correct the reference if it is not correct.

Response SP 14

Revised text to reference Section RP.6 for seed mixtures and revegetation operations.

Comment SP 15

Reclamation Plan, Table RP6.1. Could you please add a footnote listing the disturbances that are included in the 87.3 acres of Disturbance and what the disturbances will be postmining in the 56.1 acres.

Response SP 15

Added footnote describing disturbance for premining and postmining to Table RP.6-1 as requested.

Comment SP 16

Reclamation Plan, Exhibit RP.2-1. Postmining the landuse will be Grazingland and Fish and Wildlife Habitat (937.7 acres) and Cropland (3.7 acres) with 56.1 acres of disturbance, 4.9 acres of water and 11.6 acres of wetland. These landuses will match the landuses on Exhibit D1.1-1. With just minor acreage changes shown in Table RP.6-1. Since the railroad and major roads are identified and Taylor Quarry is going to be reclaimed to Grazingland and Fish and Wildlife Habitat, the Industrial commercial stippling is not needed on these areas.

Response SP 16

Revised exhibit as requested.

Other Comments

Comment MK 27

Items Requested in Electronic Format for Preparation of CHIA, 1. Please provide a CAD or ArcGIS shapefile that contains the proposed permit boundary for the Brook Mine. This file will be used to prepare maps in the CHIA. This file can be emailed to: matthew.kunze@wyo.gov. (MDK)

Response MK 27

See response to comment MK 28.

Comment MK 28

Items Requested in Electronic Format for Preparation of CHIA, 2. Please provide the baseline surface and groundwater data collected to support baseline characterization for the permit application. All data can be submitted on Excel templates (Attachments) found on the LQD website for the Coal Annual Report Format (CARF): http://deq.wyoming.gov/lqd/coal/resources/annual-report-3/.

• Please provide all surface water flow and water quality data for the following surface water stations: SM578415-SW-1, SM578409-SW-1, SM578418-SW-1, and SM578512-SW-1.

• Please provide all groundwater level and water quality data for all Brook Mine monitoring wells shown in Table D6.2-1.

Response MK 28

The electronic data requested is being compiled in the requested format and will be provided when it is completed.

From:	Muthu Kuchanur
To:	BJ Kristiansen
Cc:	Matthew Kunze
Subject:	Re: FW: Brook Mine round 1 responses
Date:	Wednesday, July 29, 2015 10:46:53 AM
Attachments:	image001.jpg

Thanks BJ for making the review a little easier.. I appreciate it.

Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Wed, Jul 29, 2015 at 10:42 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Hey guys, here is the Round 1 responses on WORD format.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, July 29, 2015 10:01 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** RE: Brook Mine round 1 responses
>
> BJ,
>
> This should help, let me know if you need anything further
>
> ---
>
> **From:** BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
> **Sent:** Wednesday, July 29, 2015 9:45 AM
> **To:** Jeff Barron
> **Subject:** Brook Mine round 1 responses

Jeff,

Do you have a WORD copy of the comments and responses from the round 1 of the Brook mine permit evaluation? Muthu would like to keep everything in the same document so his round 2 responses fit into the narrative. If not, let me know and I'll work with what we have.

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	BJ Kristiansen
Subject:	Re: Brook Mine Second Round Technical Review
Date:	Monday, August 03, 2015 11:33:02 AM
Attachments:	MDK_Second Round Review on Brook Mine New Permit Application_TFN 6 2-025.docx

---

Bj,

Please find the attached review of the responses to my first round comments on the application. I will also send up a hard copy. If you would like to discuss any of these, please let me know.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>
> Thanks,
>
> Mark Rogaczewski
> Supervisor
> LQD District III
> 2100 West 5th Street
> Sheridan, WY 82801
> 307-675-5616
> mark.rogaczewski@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Matt Kunze, LQD Division Services

DATE: August 3, 2015

SUBJECT: Second Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

Responses to first round comments on the Brook Mine permit application (TFN 6 2/025) were received by the Cheyenne LQD on July 20, 2015. The following is a review of the responses to my first round comments on the application.

Appendix D6-Hydrology

Section D6.1.2 Drainage Basin Description

Comment MK 29. Response not accepted. Please include additional discussion on the hydrology of Slater Creek to include what was added to Page D11-8 in Appendix D-11 in response to Comment MK 8: *Infiltration of precipitation into the burn and then slow release of the stored water acts as a water source for the subirrigation and surface flow of Slater Creek.*

In addition, a comparison of the 2014 observed flows between the upstream and downstream stations on Slater Creek shows that flows were higher at the upstream station for the majority of the period. This may suggest Slater Creek is a losing stream. Please discuss this further in the description of the hydrology of Slater Creek. (MDK)

Section D6.1.3.2 Flood Studies

Comment MK 30. Response accepted. (MDK)

Comment MK 31. Response not accepted. The citation (U.S. Army Corps of Engineers, 2001) on Page D6-3 still does not appear in the reference list. Please add this to the Reference Section (Section D6.3). (MDK)

Comment MK 32. Response accepted. (MDK)

Comment MK 33. Response accepted. (MDK)

Comment MK 34. Response accepted. (MDK)

Section D6.1.5.1 Monitoring Stations

Comment MK 35. Response not accepted. The location coordinates are needed for plotting the locations of the stations; the quarter-quarter does not provide the needed level of accuracy for this. Reporting the northing/easting State Plane coordinates for monitoring locations is standard practice in other LQD coal permits and would be required when reporting station information in

the Annual Report as part of the LQD Coal Annual Report Format (CARF). Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

Comment MK 36. Response accepted. (MDK)

Comment MK 37. Response accepted. (MDK)

Comment MK 38. Response accepted. (MDK)

Section D6.1.5.2 Surface Water Quantity
Comment MK 39. Response not accepted. The response referenced Comments DM 2 and MK 30, which refer to Slater Creek, not Hidden Water Creek. The LQD emailed the Hidden Water Creek data to WWC Engineering on July 8, 2015. Please incorporate and discuss the data to strengthen the baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application. (MDK)

Section D6.1.5.3 Surface Water Quality
Comment MK 40. Response accepted. (MDK)

Comment MK 41. Response to the comment is pending. As discussed in the review of the response to Comment MK 39, the LQD emailed the Hidden Water Creek data to WWC Engineering on July 8, 2015. Please incorporate and discuss the data to strengthen the baseline water quality characterization of Hidden Water Creek in the Brook Mine permit application. (MDK)

Section D6.1.5.4 Sediment Transport
Comment MK 42. Response accepted. (MDK)

Addendum D6-5 – Rating Curves
Comment MK 43. Response not accepted. Developing a rating curve for an open channel using only Manning's equation and no direct measurements is not a standard practice. If a direct discharge measurement is not occasionally taken, the accuracy of the modelled rating curve will never be known. Please commit to periodically taking a direct measurement to evaluate the rating curves. (MDK)

Comment MK 44. Response accepted. (MDK)

Appendix D10-Wetlands

Section D10.2 Results
Comment MK 45. Response accepted. (MDK)

Appendix D11-AVF

Section D11.1 Introduction
Comment MK 1. Response not accepted. Mine Plan Section MP.6 does not explicitly mention or discuss the Tongue River AVF, or AVFs in general. Please provide a more thorough

discussion in MP.6 on the possible effects of mining on the AVFs, particularly the Tongue River AVF with respect to drawdown in the Tongue River alluvium. Please also see the review of the response to Comment MK 21 below. (MDK)

Section D11.2 Purpose and Scope
Comment MK 2. Response accepted. (MDK)

Section D11.3 Stream Laid Deposits
Comment MK 3. Response accepted. (MDK)

Comment MK 4. Response accepted. (MDK)

Comment MK 5. Response accepted. (MDK)

Section D11.4.2 Extent of Subirrigation
Comment MK 6. Response accepted. (MDK)

Comment MK 7. Response accepted. (MDK)

Comment MK 8. Response accepted. (MDK)

Comment MK 9. Response not accepted. The cross-sections were updated as requested but it is not clear if the materials from the borehole logs truly represent the active stream channel, as many of the borehole logs are shown to be tens to hundreds of feet away from the active channel. Please provide a description of the materials in the active channel bottom of both Hidden Water Creek and Slater Creek. (MDK)

Section D11.4.3 Extent of Natural and Artificial Flood Irrigation
Comment MK 10. Response accepted. (MDK)

Section D11.4.4 Water Quality
Comment MK 11. Response accepted. (MDK)

Section D11.4.5 Agricultural Practices
Comment MK 12. Response not accepted. Please also add to the text any history available on the Early Creek Ditch No. 1 water right and the irrigation associated with the water right. I looked at several years of aerial imagery and it does not appear that any areas have been irrigated under this water right in recent times. I am able to view what appears to be the headgate and two ditches. It is possible that irrigation was abandoned long ago, which would support the contention that there is not sufficient water supply for consistent agricultural practices. Nonetheless, the water right remains fully adjudicated according to the SEO water rights database, so more discussion of this area is warranted in the text. (MDK)

Comment MK 13. Response accepted. (MDK)

Comment MK 14. Response accepted. (MDK)

Comment MK 15. Response accepted. (MDK)

Comment MK 16. Response accepted. (MDK)

Section D11.6 Extent of Alluvial Valley Floor
Comment MK 17. Response not accepted. Additional discussion was added for East Fork Earley Creek, but not Earley Creek. However, it is unclear from Comment BJ 26 if the LQD intends to make an AVF determination for Earley Creek. Additional response to this comment may be needed after checking with other LQD staff on whether or not a determination will be made for Earley Creek. (MDK)

Comment MK 18. Response accepted. (MDK)

Comment MK 19. Response accepted. (MDK)

Comment MK 20. Response accepted. (MDK)

Section D11.7 Mining of Alluvial Valley Floor
Comment MK 21. Response not accepted. Please see the review of the response to Comment MK 1. Please provide a more specific reference to the section of the Mine Plan (MP.6) that discusses the probable hydrologic impacts to the Tongue River and Goose Creek AVFs. Please also prove a more specific reference to the appropriate portion of the Mine Plan or Reclamation Plan that provides further details on the AVF monitoring plan. (MDK)

Comment MK 22. Response not accepted. The essential hydrologic functions of the Goose Creek AVF are listed, but the text does not explicitly address a monitoring system for the Goose Creek AVF, only the Tongue River AVF. Please commit to a similar monitoring system for the Goose Creek AVF to demonstrate that the essential hydrologic functions will be maintained. The text should also reference the appropriate portion of the Mine Plan or Reclamation Plan that provides further details on the AVF monitoring plan. (MDK)

Mine Plan

Section MP.20 Alluvial Valley Floors
Comment MK 23. Response accepted. (MDK)

Section MP.4.1 Mining Sequence
Comment MK 46. Response accepted. (MDK)

Section MP.5.1 Surface Drainage and Erosion Plan
Comment MK 47. Response accepted. (MDK)

Comment MK 48. Response accepted. (MDK)

Section MP.5.2 Sedimentation and Wastewater Impoundments
Comment MK 49. Response accepted. The text states that there are no currently planned sedimentation impoundments planned at the Brook Mine. Please see new Mine Plan and Reclamation Plan comments below that request this clarification elsewhere in the permit. (MDK)

Section MP.5.3 Flood Control
Comment MK 50. Response accepted. (MDK)

Section MP.5.4 Diversions
Comment MK 51. Response accepted. (MDK)

Comment MK 52. Response accepted. (MDK)

Section MP.5.5 Culverts
Comment MK 53. Response accepted. (MDK)

Section MP.5.8 Mine Pit Dewatering Plan
Comment MK 54. Response accepted. (MDK)

Comment MK 55. Response accepted. (MDK)

Section MP.6.1 Surface Water
Comment MK 56. Response accepted. (MDK)

Comment MK 57. Response not accepted. Exhibit MP.1-1 does show trenches in the east portion of the mine, but not the western portion. For example, in the first full paragraph on Page MP-42, it discusses trenches being constructed perpendicular to the flow path of the minor Tongue River drainages. On Page MP-43, several trenches are discussed: one trench constructed parallel to Slater Creek's flow in Section 18, a trench in associated with the surface mine to the west of Slater Creek, and a trench parallel to Slater Creek in Sections 11, 12, and 13. On Page MP-43, a trench is discussed along the "TRD5" channel. Please add all of these trench locations to Exhibit MP.1-1. Also, please use a different color other than grey for the trenches, as this color tends to blend with the topographic line color. (MDK)

Comment MK 58. Response accepted. (MDK)

Comment MK 59. Response accepted. (MDK)

Comment MK 60. Response accepted. (MDK)

Comment MK 61. Response not accepted. The text clarified that the only direct disturbance to the Slater Creek channel is where the channel will be redirected through a culvert under a proposed haul road. However, the sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility" is still unclear. This statement implies that the channel stability of Slater Creek will be affected,

and that bed and banks could experience excessive erosion. Please provide more discussion on what is meant by impacts to Slater Creek channel geomorphology. (MDK)

Comment MK 62. Response accepted. (MDK)

Comment MK 63. Response not accepted. The text speaks to impacts to existing reservoirs/water rights on the permit boundary but does not provide a statement as to possible impacts to water rights off or downstream of the permit boundary. Please provide this discussion in the text. (MDK)

Comment MK 64. Response accepted. (MDK)

Section MP.6.1.1 Land Erosion Stability
Comment MK 65. Response accepted. However please note the new Mine Plan comment below that relates to this section. (MDK)

Section MP.7.1 Surface Water Monitoring
Comment MK 66. Response not accepted. Any reservoir potentially disturbed by mining activities should have a baseline water quality sampled collected with the information presented in Appendix D6. Section MP.6.1 states that Big Horn No. 2 Reservoir, Big Horn No. 14 Reservoir, Permanent Impoundment #1 Reservoir, and Legerski #1 Reservoir will be impacted by mining activities and will be reclaimed. At a minimum, the baseline water quality should be provided for these reservoirs in Appendix D6. RAMACO may also wish to expand the list of reservoirs sampled for baseline water quality to match those listed in Table RP.8-9. (MDK)

Also, there is now a statement on Page MP-49: *All existing reservoirs, stockponds, and proposed reservoirs that will be disturbed by surface mining activities as discussed in Section MP.6.1 will be monitored for relevant discharge through grab samples to ensure that any water released from these reservoirs meets the WDEQ/LQD guidelines discussed above*. It is unclear which WDEQ/LQD guidelines are being referred to. Also, if these reservoirs are going to be discharging, a WYPDES permit would likely be required. Please clarify these items in the text (MDK).

Comment MK 67. Response accepted. (MDK)

Comment MK 68. Response not accepted. The coordinates were not added to the Table. Please see response to Comment MK 35. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

Comment MK 69. Response accepted. (MDK)

Comment MK 70. Response accepted. (MDK)

Comment MK 71. Response not accepted. The response states that the text was revised but the same statement remains without any additional explanation. If surface and groundwater interactions are expected to exist then these should have already been discussed in the baseline characterization of the hydrologic system. It does not appear that the permit application

discusses surface/groundwater interactions. Please provide more explanation on this in the text. (MDK)

Section MP.8 Water Use
Comment MK 72. Response accepted. (MDK)

Comment MK 73. Response accepted. (MDK)

<u>Addendum MP-6 Subsidence Control Plan</u>
Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation
Comment MK 74. Response accepted. (MDK)

<u>Reclamation Plan</u>

Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors
Comment MK 24. Response not accepted. Please provide a more thorough discussion for each identified essential hydrologic function to demonstrate that the functions will be maintained throughout the mining operation. In particular, since mining is predicted to cause some amount drawdown in the Tongue River alluvium (Mine Plan Addendum MP-3), this needs specific discussion to demonstrate that the essential hydrologic functions will be maintained and/or reestablished.

Please also provide more detail on the plan and frequency of analyzing the aerial imagery. In addition, please note that given that Mine Plan Addendum MP-3 predicts some amount of drawdown in the alluvium of the Tongue River, installation of alluvial monitoring wells would be required to monitor the AVF. Otherwise there will be no way to assess the validity of the predicted drawdowns. Please provide a more detailed plan for installing the alluvial monitoring well(s). (MDK)

Comment MK 25. Response not accepted. Please revise the discussion on the Goose Creek AVF monitoring system as per the response to Comment MK 24. (MDK)

Comment MK 26. Response accepted. (MDK)

<u>Reclamation Plan</u>
Section RP.3.3 Postmine Slope Analysis
Comment MK 75. Response accepted. (MDK)

Section RP.3.5 Drainage Reestablishment
Comment MK 76. Response accepted. (MDK)

Section RP.4.2 Mitigation of Unsuitable Material
Comment MK 77. Response accepted. (MDK)

Section RP.5.6 Erosion Control and Conservation Practices
Comment MK 78. Response accepted. (MDK)

Section RP.7.4 Aquatic Habitat
Comment MK 79. Response accepted. (MDK)

Comment MK 80. Response accepted. (MDK)

Section RP.8.1 Drainage Basin Reconstruction
Comment MK 81. Response accepted. (MDK)

Comment MK 82. Response accepted. (MDK)

Comment MK 83. Response accepted. (MDK)

Section RP.8.1.1 Discharge Estimates
Comment MK 84. Response accepted. (MDK)

Comment MK 85. Response accepted. (MDK)

Comment MK 86. Response accepted. (MDK)

Section RP.8.1.2 Channel/Floodplain Design
Comment MK 87. Response accepted. (MDK)

Comment MK 88. Response accepted. (MDK)

Comment MK 89. Response accepted. (MDK)

Section RP.8.2 Permanent Impoundments
Comment MK 90. Response accepted. (MDK)

Comment MK 91. Response accepted. (MDK)

Comment MK 92. Response not accepted. The response referenced Comment DS 28, which did not mention consulting with the SEO about the Yellowstone Compact. As indicated in the response to Comment MK 73, RAMACO is aware of the Yellowstone Compact and will act in accordance with the guidelines outlined. Please add a similar statement to Section RP.8.2. (MDK)

Section RP.8.4.2 Surface Water Monitoring
Comment MK 93. Response accepted. (MDK)

Section RP.8.4.3 Postmine Impoundments
Comment MK 94. Response accepted. (MDK)

Comment MK 95. Response accepted. (MDK)

Comment MK 96. Response accepted. (MDK)

Comment MK 97. Response accepted. (MDK)

Section RP.8.5.2 Surface Water
Comment MK 98. Response accepted. (MDK)

Comment MK 99. Response accepted. (MDK)

Comment MK 100. Response accepted. (MDK)

Section RP.9.1 Introduction
Comment MK 101. Response accepted. (MDK)

Comment MK 102. Response accepted. (MDK)

Section RP.14 Bond Release
Comment MK 103. Response accepted. However please note that RAMACO may wish to also cite LQD Guidelines No. 20, 21, 22, 23, and 25, as these are key documents for assisting operators with bond release procedures. (MDK)

Other Comments

Items Requested in Electronic Format for Preparation of CHIA
Comment MK 27. Response to the comment is pending. Review of the response to this comment will be completed when the information is received. (MDK)

Comment MK 28. Response to the comment is pending. Review of the response to this comment will be completed when the information is received. (MDK)

NEW COMMENTS

Appendix D-11

1. The permit application suggests that the Tongue River and Goose Creek contain AVFs. Appendix D-11 must therefore also include a discussion of the importance of these AVFs to farming, as discussed in LQD Guideline No. 9 (see Part IV, Section C). (MDK)

2. Appendix D-11 (or perhaps Mine Plan MP.6) should also include a discussion of whether the proposed operation would interrupt, discontinue, or preclude agriculture use of the Tongue River and Goose Creek AVFs. This discussion should evaluate if the predicted drawdown in the Tongue River alluvium (Mine Plan Addendum MP-3) would result in any loss of agricultural use of the AVF. (MDK)

Mine Plan

1. In Section MP.2.1.2 Change House and Equipment Service Shop, on Page MP-8, it states that wash down water will be routed to wastewater impoundment. As stated on Page MP-26, wastewater reservoirs are not currently planned as part of the mining operation.

The text in this section should also clarify that wastewater reservoirs are not planned. (MDK)

2. In Section MP.5.2.1 General Design Criteria, there is a sentence: *A discussion regarding the USLE method is provided in Section MP.6.1.1*. As per to the response to Comment MK 65, Section MP.6.1.1 has been removed. Please remove the sentence that references Section MP.6.1.1. (MDK)

3. In Section MP.6.1 Surface Water, there is a sentence on Page MP-42: *Any surface runoff to come in contact with mining disturbance will be treated in the pits or retained in sedimentation control structures in the vicinity of Hidden Water Creek to meet water quality standards before being discharged from the Permit Area*. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

4. In Section MP.6.1 Surface Water, there is a sentence on Page MP-42: *As previously discussed, any runoff coming into contact with mining activities will be captured in a sedimentation impoundment or ASCM to meet water quality standards prior to discharge from the Permit Area*. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

5. In Section MP.6.1 Surface Water, there is a sentence on Page MP-43: *Sedimentation impoundments will capture runoff that has come in contact with mining activities, and will treat the water to meet water quality standards before discharge*. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

6. In Section MP.6.1 Surface Water, there is a sentence on Page MP-44: *Any runoff that does enter disturbed areas will be captured in a sedimentation pond or treated in the trenches to meet water quality requirements before being discharged from the Permit Area.* As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

7. In Section MP.12.5 Mine Facilities, the first bullet is for a Sedimentation Pond. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

8. In Section MP.12.5 Mine Facilities, the second bullet is for a Wastewater Reservoir. As stated on Page MP-26, wastewater reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that wastewater reservoirs are not planned. (MDK)

9. In Section MP.12.5 Mine Facilities, the third bullet is for a Flood Control Reservoir. As stated on Page MP-29, flood control reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that flood control reservoirs are not planned. (MDK)

10. Mine Plan Addendum MP-1 commits to getting LQD approval and doing further sediment yield analysis for ASCMs that drain larger than 30 acres, as per LQD Guideline No. 15. It isn't clear from the Hydrologic Control Plan in Exhibit MP 5-1 if any of the currently proposed ASCMs drain more than 30 acres. Please indicate if any of the ASCMs shown in Exhibit MP 5-1 drain more than 30 acres. (MDK)

11. LQD Guideline No. 15 states that ASCMs should not be used for disturbed or reclaimed areas that are within one-half mile (channel distance) of Class 1 or Class 2 streams. Since the Tongue River and Goose Creek are Class 2 streams, please provide an analysis of the distance of the currently proposed ASCMs on Exhibit MP 5-1 to the Tongue River and Goose Creek. In accordance with LQD Guideline No. 15, more traditional sediment control methods (i.e., sedimentation impoundments) may be needed for disturbed areas that are close to the Tongue River and Goose Creek. (MDK)

12. LQD Guideline No. 15 provides monitoring guidance for ASCMs based on the drainage area upstream of the ASCM. For large receiving streams (drainage area greater than 1.0 square mile), monitoring should include repeated surveys of channel cross-sections and/or upstream and downstream sediment yield stations. Please provide a commitment to conduct this monitoring to evaluate the performance of the proposed ASCMs that drain to large receiving streams. (MDK)

Reclamation Plan

1. In Section RP.3.4 Erosion and Sedimentation Control Practices, the first sentence on Page RP-4 references sedimentation impoundments. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

2. In Section RP.8.5.2 Surface Water, the third sentence of the last paragraph on Page RP-46 references sedimentation reservoirs. As noted in the response to Comment MK 49, sedimentation reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation reservoirs are not planned. (MDK)

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Brook Mine Second Round Technical Review
Date: Monday, August 03, 2015 11:55:58 AM

Thank you matt.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Monday, August 03, 2015 11:33 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: Brook Mine Second Round Technical Review

Bj,

Please find the attached review of the responses to my first round comments on the application. I will also send up a hard copy. If you would like to discuss any of these, please let me know.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>
> Thanks,
>
> Mark Rogaczewski
> Supervisor
> LQD District III
> 2100 West 5th Street
> Sheridan, WY 82801
> 307-675-5616
> mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Muthu Kuchanur
To:	BJ Kristiansen
Subject:	Brook Mine - TFN 6 2-025 / Second Round Review Comments
Date:	Tuesday, August 04, 2015 11:27:52 AM
Attachments:	MuthuKuchanur_Second Round Comments_ Brook Mine _TFN 6 2-025.docx

---

Hi BJ,

Please find attached my review comments. As noted in my comment # 32, I was unable to review the model files because of the version compatibility issue. As you know, OSM is looking into this issue and has not responded yet with a resolution. I am open to any additional suggestions from the mine to resolve this issue.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Muthu Kuchanur, LQD Division Services

DATE: August 4, 2015

SUBJECT: Second Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

As requested by your July 15, 2015 memorandum, I have performed a review of the responses to my first round comments.

Appendix D5

Section D5.3.3.2 Overburden and Interburden

1. Response not accepted. In addition to the reference to Addendum D5-3 cross section figures, please provide a textual interpretation on the overburden thickness. Please refer to D53.3.2 interburden thickness description as an example for the requested description. (MK)

Section D5.3.3.3 Coal

2. Response not accepted. In addition to the reference to Addendum D5-3 cross section figures, please provide a textual description/interpretation on the depth from land surface to the different coal seams targeted by the mine plan. (MK)

Section D5.3.3.3 Coal

3. Response not accepted. It is acknowledged and accepted that Table 5.3-2 is updated with coal quality characteristics of Monarch coal seam. In addition to the reference to Addendum D5-3 cross section figures, provide a textual interpretation of thickness and depth from land surface for the Monarch coal seam. (MK)

4. Response accepted. (MK)

Section D5.3 Geology of Mine Area

5. Response not accepted. Please expand the discussion in the newly added Section D5.3.3.4 to include a textual interpretation of the underburden thickness. (MK)

Addendum D5-3 Geologic Cross Sections

6. Response not accepted. In addition to the reference to cross section figures, please provide a textual description on the variability, interpreted thicknesses of these stringers. (MK)

Addendum D5-4 Isopachs

7. Response not accepted. It is acknowledged and accepted that the labels for all the control point names were included. However, thickness (or elevation, as appropriate) labels are not included as requested. Is it relatively easy for the software that was used for isopach elevation contours to label the thickness (or elevation)? The intent of this comment is to increase the robustness of the review of the interpreted contours by having appropriate point control data plotted in the same map. This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table

8. Response accepted. (MK)

<u>Appendix D6</u>

Section D6.2.1 Regional Hydrogeology

9. Response accepted. (MK)

10. Response accepted. (MK)

11. Response not accepted. In addition to a reference to Addendum D5-2, please provide a description/interpretation on the aerial and vertical extent of dry zones. (MK)

12. Response accepted. (MK)

Section D6.2.2.1 Monitor Well Construction, Completion and Development

13. Response accepted. (MK)

14. Response accepted. (MK)

Section D6.2.2.2 Aquifer Tests

15. Response not accepted. The updated text just notes that there were three alluvial wells completed in Slater Creek. The original comment remains to be addressed. (MK)

16. Response conditionally accepted. Please incorporate the response into the permit application. (MK)

17. Response accepted. (MK)

18. Response conditionally accepted. Please incorporate the response into the permit application. (MK)

19. Response conditionally accepted. Please incorporate the response into the permit application. (MK)

20. Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Section D6.2.2.4 Premining Potentiometric Surface

21. Response not accepted. The revised text states, "Groundwater gradients are low ranging from approximately 2 – 4 ft/year in the Masters Coal and 1 to 2.5 ft/year in the Carney Coal." Please correct the sentence to reflect velocities. (MK)

22. Response accepted. (MK)

Section D6.2.2.5 Recharge and Discharge Areas

23. Response accepted. (MK)

24. Response accepted. (MK)

25. Response conditionally accepted. Please incorporate the response into the permit application to document the justification for not including additional analysis on infiltration. (MK)

26. Response accepted. (MK)

Section D6.2.3 Baseline Water Quality

27. Response accepted. (MK)

28. Response accepted. (MK)

Section D6.2.4 Groundwater Rights

29. Response not accepted. The response indicates Appendix B and the updated text indicated Appendix B2. Please clarify if that is Appendix B or Appendix B2. (MK)

30. Response not accepted. It is acknowledged and noted that water rights vary with time. The intent of this comment is to request a summary of the raw data on the water rights presented in Appendix B, which is a snapshot in time before the approval of the proposed operations. It will enable the reviewers to get a clear understanding of the existing groundwater water uses and if there is a significant dependence on the affected aquifers. In addition, it is very useful information for the CHIA to provide a summary on the groundwater hydrologic concerns within the impact area. Please summarize (i) total number of water rights, (ii) number of wells (iii) wells grouped by aquifer and (iv) permitted water use. Example: Sum the total number of wells, provide a description on the percent of different types of uses. (MK)

31. Response not accepted. In addition to the reference to Appendix B, please include a textual description and summary of the premine groundwater use within the permit boundary and adjacent areas. (MK)

Mine Plan

32. Response conditionally accepted. Because of a version compatibility issue between the software used by the LQD and the mine, the LQD was not able to review the model files. The LQD has contacted Office of Surface Mining (OSM) to explore the options (if any) to update the Groundwater Vistas software to the latest version. OSM is looking into this issue and has not responded during the completion of the review. The LQD would also welcome any suggestions from the mine to resolve this issue. (MK)

MP.1.1 Type of Mine

33. Response accepted. (MK)

34. Response accepted. (MK)

MP.5.8 Mine Pit Dewatering Plan

35. Response not accepted. Please provide a range of estimates of the expected groundwater inflows to the pit. The intent of this comment is to understand the volume/rate of water that will be dewatered to facilitate mine operations. In addition, please clarify if the groundwater model provides an estimate of this inflow to the pit. (MK)

36. Response not accepted. It is acknowledged that the water will be collected in a sump. The intent of the comment is to get an understanding on the effects of faults on the inflows to the pit. For example, are the pit inflow rates sensitive to the location and permeability of the faults within the permit boundary? If yes, please provide a range of estimates to account for this sensitivity. (MK)

MP.5.9 Dewatering Wells

37. Response not accepted. In addition to the reference to Appendix D6, please provide a description of any expected variability or trends in water quality of the groundwater removed as different coal seams are mined. Are there any expected groundwater constituents of concern based on Appendix D6? (MK)

38. Response accepted. (MK)

MP.5.8 Groundwater Rights

39. Response accepted. (MK)

MP.6.2.Groundwater

40. Response not accepted. Not able to locate the revision made. Typically, the revisions from other operators are highlighted with bolded text or a different color to enable the reviewer to efficiently review the changes made. Without that tracking mechanism, it is difficult to review the exact revisions. Please consider using a distinct tracking mechanism in the future submittals. (MK)

41. Response accepted. (MK)

42. Response accepted. (MK)

MP.6.3.2 Plan to Mitigate the Impacts on Groundwater

43. Response accepted (MK)

MP.7.2 Groundwater Monitoring

44. Response not accepted. Please provide a more detailed plan for installing the proposed alluvial monitoring well(s). (MK)

45. Response accepted. (MK)

MP.8 Water use

46. Response not accepted. Please provide additional description on the source aquifer for the proposed industrial supply wells. (MK)

47. Response not accepted. The SEO requires a submittal of the water use by the other mines. In addition, the coal review reports by the BLM also provide a summary of water use. Example: AECOM, Inc., 2014, Update of the Task 1B Report for the Powder River Basin Coal Review – Current Water Resources Conditions, prepared for Bureau of Land Management High Plans District Office and Wyoming State Office, http://www.blm.gov/pgdata/etc/medialib/blm/wy/programs/energy/coal/prb/coalreview/phase2/Task1B.Par.91805.File.dat/Task1B.pdf.

48. Response not accepted. The information will be reviewed as soon as it is made available to the LQD. (MK)

49. Response not accepted. The text indicates that the total water use will be approximately 400 million gallons per year. Please provide at least a range of expected variability in this projected annual water use. (MK)

Addendum MP-3 Groundwater Model

50. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

51. Response not accepted. It is appreciated and acknowledged the note of lithologic logs. In addition, please clarify or substantiate if there is any hydrologic evidence to support the interpretation that the faults are no flow boundaries (Example: water levels, water quality or other hydrologic evidence). This will increase the validity of the no-flow assumption. (MK)

52. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

53. Response accepted. (MK)

54. Response accepted. (MK)

55. Response conditionally accepted. Please include the discussion on CIR into the permit application (MK)

56. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

57. Response accepted. (MK)

58. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

59. Response accepted. (MK)

60. Response accepted. (MK)

61. Response not accepted. It is acknowledged that Section 4.2.1 provides the thickness of the model layers. *Also, the response states, "Addendum MP-3 Section 2.5 describes the thickness of the various coal seams."* Addendum MP-3, Section 2.5 does not describe the thickness but it is a section on hydraulic properties. Please clarify. (MK)

62. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

63. Response accepted. (MK)

64. Response not accepted. It is acknowledged and noted that GW Vistas handles it in an automated mode. Please provide a description on if there were any additional checks conducted on the results from the groundwater model to verify if the aquifer type used by GW Vistas is consistent with the conceptual model and field data. Example discussion: Are the deeper layers confined for the entire simulation or do they change from confined to unconfined due to mine operations? (MK)

65. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

66. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

67. Response accepted. (MK)

68. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

69. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

70. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

71. Response accepted. (MK)

72. Response accepted. (MK)

73. Response conditionally accepted. Please incorporate the tables into the permit application. (MK)

74. Response conditionally accepted. Please incorporate the context of the response into the permit application. In addition, clarify the reason for increased recharge from the steady state to transient models (5,138 vs 5,434 cu.ft/day).

75. Response accepted. (MK)

76. Response accepted. (MK)

77. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

78. Response accepted. (MK)

79. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

80. Response not accepted. Appendix A is missing with the electronic files provided to the Cheyenne Office. The hydrographs will be reviewed after the receipt of this Appendix A. (MK)

81. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

82. Response accepted. (MK)

83. Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

84. Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)

85. Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)

86. Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)
87. Response accepted. (MK)

88. Response not accepted. Appendix A is missing with the electronic files provided to the Cheyenne Office. The hydrographs will be reviewed after the receipt of this Appendix A. (MK)

89. Response conditionally accepted. Please incorporate the context of the response into the permit application

Addendum MP-6 Subsidence Control Plan

90. Response accepted. (MK)

<u>Reclamation Plan</u>
RP 8.5.3 Groundwater

91. Response accepted. (MK)

92. Response accepted. (MK)

93. Response accepted. (MK)

94. Response accepted. (MK)

95. Response accepted. (MK)

96. Response accepted. (MK)

New Comment

97. In the next submittal, please consider providing a text tracking mechanism that will highlight the changes that are made in response to the comments. Typically, it can be a **bolded font** for all the text that is revised. This will help the reviewer to review the appropriate revised text. Without this bold font or some distinct highlight for the revised text, the reviewer has to compare against the initial submittal to get a handle on the changes that were made in response to the LQD comments.

From:	BJ Kristiansen
To:	andrew kuhlmann
Cc:	Kyle Wendtland; mark.rogaczewski@wyo.gov
Subject:	Ramaco, Brook Mine correspondence
Date:	Wednesday, August 05, 2015 2:52:29 PM
Attachments:	ramaco deq requests.pdf image001.jpg

Andrew,

Here are the two letters we discussed this afternoon. The District Court decision that should be coming up within the next 30 – 45 days will certainly have a bearing on these requests.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

6 2/025

MR KM DE SP
KK ~~BK~~ LM JM
PS MB DM DS
JJ DL

HOLLAND&HART LLP
THE LAW OUT WEST

Thomas L. Sansonetti
Phone (303) 290-1061
Fax (303) 290-1606
tlsansonetti@hollandhart.com

July 31, 2015

RECEIVED
AUG - 3 2015
DEQ
SHERIDAN

Jeff Oven, Esq.
Crowley Fleck, PLLP
P.O. Box 2529
Billings, MT 59103-2529

Re: Big Horn Coal Co. Reclamation Demand – Wyoming DEQ Inactive Coal Mining Permit No. 213 and Sheridan County District Court CV-2014-372

Dear Jeff:

I am writing on behalf of Brook Mining Co, LLC and Ramaco Wyoming Coal, LLC (Ramaco) to demand that Big Horn Coal Co. ("BHC") immediately remove its abandoned rail spur located in Sections 21 and 22 of T57N, R84W. The rail spur sits outside of Burlington Northern, Santa Fe's right-of-way and on top of Ramaco's coal. In its current location, the rail spur will interfere with Ramaco's pending plans to exercise its rights to use the surface "as is necessary or convenient" to mine coal. For Ramaco to exercise its rights, BHC will need to remove the spur, tracks, and ballast. BHC will also need to reclaim the land underlying the removed rail system. BHC needs to complete this work at its expense and in good faith consultation with Ramaco, its consultants, and its attorneys.

At this point, no evidence exists that BHC can keep the rail spur, track, and ballast in those sections. After Ramaco presented BHC with evidence that its abandoned spur interferes with Ramaco's rights to mine coal in these sections, BHC produced no evidence to the contrary. In fact, BHC has largely conceded that it does not have a legal right to keep the rail spur. At the recent summary judgment hearing in the pending civil case, BHC effectively conceded that it has no right to maintain the portion of the track in the south half of Section 22. BHC also effectively conceded that it promised the State of Wyoming's Department of Environmental Quality that it would demolish and reclaim the remainder of the track and ballast that lies in the north half of Section 22 and in Section 21. Ramaco simply requests that BHC fulfill its promises and allow Ramaco to exercise its rights.

Please plan to use me at this law office as BHC's initial point of contact to communicate about this work and to coordinate the timing and plan for this reclamation project. Please respond

at your earliest convenience to inform me whether BHC intends to undertake removal of the spurtrack in Sections 21 and 22.

Sincerely,

Tom Sansonetti

Thomas L. Sansonetti
a partner of Holland & Hart LLP

cc: Randall W. Atkins, Ramaco
State of Wyoming Dept. of Environmental Quality (Sheridan Office)

7946700_3

RECEIVED
AUG - 3 2015
DEQ
SHERIDAN

6 2/025

MR KM DE SP
KK LM JM
PS MB DM DS
JJ DL

HOLLAND&HART LLP
THE LAW OUT WEST

Thomas L. Sansonetti
Phone (303) 290-1061
Fax (303) 290-1606
tlsansonetti@hollandhart.com

July 31, 2015

State of Wyoming, Department of Environmental Quality
Land Quality Division
Mark Rogaczewski, District 3 Supervisor
2100 West 5th St.
Sheridan, WY 82801

RECEIVED
AUG - 3 2015
DEQ
SHERIDAN

Re: Big Horn Coal Co.'s incomplete reclamation of land covered by Permit No. 213.

Dear Mr. Rogaczewski:

I am writing you about reclamation work that Big Horn Coal Co. (BHC) has not completed on the lands described in coal mine Permit No. 213. Our office represents Brook Mining Co, LLC and Ramaco Wyoming Coal, LLC (Ramaco) who have the right to use parts of the surface covered by Permit No. 213 to mine coal. Ramaco is now in the permit comment and response phase for its pending new coal mine permit application before the Wyoming Department of Environmental Quality (DEQ) for lands located in Sheridan County, Wyoming. BHC's failure to reclaim continues to impede this process.

According to DEQ records for Permit No. 213, BHC stated that it would demolish and reclaim the following:

1. A rail spur, track, and ballast located in Sections 21 and 22 outside of the Burlington Northern Santa Fe Railroad right-of-way; and

2. An industrial shop building, associated roads, and fixtures in Section 15 located on approximately 24.5 acres.

Records from 2011 to present show that DEQ has repeatedly told BHC to reclaim. But BHC has ignored these demands.

Like DEQ, Ramaco has requested that BHC reclaim these structures because Ramaco intends to mine the coal underneath them. And like its response to DEQ, BHC has ignored Ramaco's requests. If BHC does not reclaim the land and structures described above within the next year, BHC will impede Ramaco's rights and pending mine permit.

However, BHC has no reason to ignore DEQ and Ramaco. BHC has not mined coal in the area covered by Permit No. 213 for over fifteen years. BHC has not permitted or applied to permit any new mining activities in this area. BHC has simply promised to reclaim. Yet BHC has

not done so, impeding the development of Wyoming minerals. Consequently, Ramaco requests that DEQ order BHC to complete the reclamation work for Permit No. 213 on a fixed timetable.

Ramaco wishes to know at your earliest convenience, if and when DEQ will contact BHC and set out a mandatory timetable for BHC to remove and fully reclaim these facilities pursuant to its Permit No. 213 reclamation requirements. Please call me with any questions concerning this request.

Sincerely,

Tom Sansonetti

Thomas L. Sansonetti
a partner of Holland & Hart LLP

cc: Randall W. Atkins, Ramaco
Jeff Oven, Esq., Big Horn counsel

7946903_3

RECEIVED
AUG - 3 2015
DEQ
SHERIDAN

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: I"m confirming our four pm meeting on Monday
Date: Sunday, August 09, 2015 12:06:24 PM

Concerning Ramaco's permit application. See you at your office. Tom

From: David Myers
To: BJ Kristiansen
Subject: Re: Brook Mine 2nd Round Review
Date: Wednesday, August 12, 2015 11:01:08 AM
Attachments: Brook Mine - TFN6_2_025 Second Round Review DJM.docx

---

Attached.

David J. Myers
Natural Resources Analyst
WDEQ / LQD District III
2100 West 5th St.
Sheridan, WY 82801
(307) 675-5614

On Wed, Aug 12, 2015 at 10:48 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Dave,
>
> Can you get me the DOC file? I will incorporate it into my final Word document.
>
> **From:** David Myers [mailto:david.myers@wyo.gov]
> **Sent:** Monday, August 10, 2015 2:54 PM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** Brook Mine 2nd Round Review
>
> Attached.
>
> Thanks,
>
> Dave
>
> *David J. Myers*
>
> *Natural Resources Analyst*
>
> *WDEQ / LQD District III*

2100 West 5th St.

Sheridan, WY 82801

(307) 675-5614

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: File: TFN 6 2/025
FROM: David J. Myers – LQD DIII Natural Resources Analyst
DATE: August 10, 2015
SUBJECT: Second Round Review of Brook Mine New Permit Application

As requested I have reviewed the responses to my round 1 comments. My observations are below.

Response DM 1
Adjudication text page WR-12 has been updated to include Barbula # 2 (P85631W) as well as Adjudication Exhibits 5 & 8.

This response is adequate.

Response DM 2
Peak flow data from the USGS gage station on Slater Creek has been provided. See response to MK 30. The text in Section D6.1.5.2 has been updated to clearly indicate that Slater Creek is an ephemeral stream.

This response is adequate.

Response DM 3
Text revised as requested.

This response is adequate.

Response DM 4
Page D9-3 was revised to reference Page D9-E3 as the location of the letter.

This response is adequate.

Response DM 5
BKS Environmental Associates, Inc., on behalf of RAMACO, requested concurrence and jurisdictional determination from the USACE on May 29, 2015. A copy of the letter sent to the USACE has been included as Attachment D10-F. Section D10-4, page D10-10 text has been updated to reflect submittal of USACE request.

This response is adequate.

Response DM 6
The revised primary haul road alignments do not cross this bridge and the use of this bridge for haul trucks and other traffic associated with the mine is not planned. Updated Exhibit MP.3-1.

This response is adequate.

Comment DM 7
Mine Plan, Exhibit MP4-3 shows Overburden Stockpiles OB-12 and OB-13, and Topsoil Stockpile TS-6 being located directly in the Slater Creek channel, without any mention of redirecting slater creek, or otherwise preventing the hydrologic consequences of damming up the creek with Overburden and Topsoil stockpiles. Please correct.
Response DM 7
Revised Exhibit MP.4-3 as requested with OB-12 and 13 as well as TS-6 moved out of slater creek channel.

This response is adequate.

Response DM 8
Revised text as requested. Revise Exhibit MP.7-1 with USGS stream gage location that is within the viewing area.

This response is adequate.

I have no further comments.

David J. Myers
Natural Resources Analyst
LQD District III

/dm

cc: Cheyenne LQD Files

From: Tammi Pusheck
To: Matt Kunze
Subject: Re: Brook Mine Second Round Technical Review
Date: Monday, August 17, 2015 11:25:02 AM

Matt did you receive this yet?

Tammi Pusheck
Records Manager
WDEQ Land Quality Division
307-777-7053
tammi.pusheck1@wyo.gov

On Wed, Jul 15, 2015 at 11:01 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:

> Jen and Tammy...once this arrives from District 3 could you please let Muthu and I know? Thanks...we have a short turnaround time to review.
>
> Matt
>
> ---
>
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>>
>> Thanks,
>>
>> Mark Rogaczewski
>> Supervisor
>> LQD District III
>> 2100 West 5th Street
>> Sheridan, WY 82801
>> 307-675-5616
>> mark.rogaczewski@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: tammi.pusheck1@wyo.gov
Subject: Out of the office Re: Brook Mine Second Round Technical Review
Date: Monday, August 17, 2015 11:25:05 AM

I am out of the office on vacation until Wednesday August 18th and will reply to your email when I return.

Thanks, Matt

--

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

From: Tammi Pusheck
To: Muthu Kuchanur
Subject: Fwd: Brook Mine Second Round Technical Review
Date: Monday, August 17, 2015 11:30:54 AM

Did you or Matt receive this yet?

Tammi Pusheck
Records Manager
WDEQ Land Quality Division
307-777-7053
tammi.pusheck1@wyo.gov

---------- Forwarded message ----------
From: **Matt Kunze** <matthew.kunze@wyo.gov>
Date: Wed, Jul 15, 2015 at 11:01 AM
Subject: Re: Brook Mine Second Round Technical Review
To: Jennifer Mickle <jennifer.mickle@wyo.gov>, Tammi Pusheck <tammi.pusheck1@wyo.gov>

Jen and Tammy...once this arrives from District 3 could you please let Muthu and I know? Thanks...we have a short turnaround time to review.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>
> Thanks,
>
> Mark Rogaczewski
> Supervisor
> LQD District III
> 2100 West 5th Street
> Sheridan, WY 82801
> 307-675-5616
> mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Muthu Kuchanur
To: Tammi Pusheck
Subject: Re: Brook Mine Second Round Technical Review
Date: Monday, August 17, 2015 12:21:22 PM

Thanks for checking Tammi. Yes, the second round comments were received and reviewed.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Mon, Aug 17, 2015 at 11:30 AM, Tammi Pusheck <tammi.pusheck1@wyo.gov> wrote:

> Did you or Matt receive this yet?
>
>
> Tammi Pusheck
> Records Manager
> WDEQ Land Quality Division
> 307-777-7053
> tammi.pusheck1@wyo.gov
>
>
> ---------- Forwarded message ----------
> From: **Matt Kunze** <matthew.kunze@wyo.gov>
> Date: Wed, Jul 15, 2015 at 11:01 AM
> Subject: Re: Brook Mine Second Round Technical Review
> To: Jennifer Mickle <jennifer.mickle@wyo.gov>, Tammi Pusheck <tammi.pusheck1@wyo.gov>
>
> Jen and Tammy...once this arrives from District 3 could you please let Muthu and I know? Thanks...we have a short turnaround time to review.
>
> Matt
>
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
>

Cheyenne, WY 82002
307-777-7055

On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.
>
> Thanks,
>
> Mark Rogaczewski
> Supervisor
> LQD District III
> 2100 West 5th Street
> Sheridan, WY 82801
> 307-675-5616
> mark.rogaczewski@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: Tammi Pusheck
Subject: Re: Brook Mine Second Round Technical Review
Date: Wednesday, August 19, 2015 7:16:52 AM

Yes we did, thanks. Mark R sent an electronic copy down and I believe the hard copy has also been stamped and inserted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Mon, Aug 17, 2015 at 11:25 AM, Tammi Pusheck <tammi.pusheck1@wyo.gov> wrote:

> Matt did you receive this yet?
>
> Tammi Pusheck
> Records Manager
> WDEQ Land Quality Division
> 307-777-7053
> tammi.pusheck1@wyo.gov
>
> On Wed, Jul 15, 2015 at 11:01 AM, Matt Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Jen and Tammy...once this arrives from District 3 could you please let Muthu and I know? Thanks...we have a short turnaround time to review.
>>
>> Matt
>>
>>
>>
>> ---
>>
>> Matt Kunze
>> Surface Water Hydrologist, Division Services
>> Wyoming Department of Environmental Quality, Land Quality Division
>> 122 West 25th Street
>> Herschler Building 3W
>> Cheyenne, WY 82002
>> 307-777-7055
>>
>> On Wed, Jul 15, 2015 at 9:51 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>>
>>> Please see attached an electronic copy of the second round technical review request for the Brook Mine coal permit application. I am sending this review request on behalf of BJ Kristiansen as he is out of the office on vacation and LQD has a limited window to complete this review under the 30 statutory deadline of August 9, 2015. Hard copies of this request will also be sent to each reviewer. If you have any questions/concerns, please contact BJ or me.

Thanks,

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Muthu Kuchanur
Cc:	BJ Kristiansen
Subject:	Brook Mine comment discussion with Jeff Barron
Date:	Monday, August 24, 2015 2:59:50 PM

Muthu,

As a fyi...I got a call today from Jeff Barron of WWC Engineering. He would like to set up a time to come down to Cheyenne to discuss some of our remaining comments on the Brook Mine application, so they have a better idea how to address the comments. He thought it would be best to do this in a face to face meeting. I told him I would talk to you next week when you are back in the office. So when you are back we can look at our schedules and get back to him with some days/times that would work.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

From: Muthu Kuchanur
To: Matthew Kunze
Cc: BJ Kristiansen
Subject: Re: Brook Mine comment discussion with Jeff Barron
Date: Monday, August 24, 2015 3:48:32 PM

Thanks Matt.

Muthu

On Monday, August 24, 2015, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Muthu,
>
> As a fyi...I got a call today from Jeff Barron of WWC Engineering. He would like to set up a time to come down to Cheyenne to discuss some of our remaining comments on the Brook Mine application, so they have a better idea how to address the comments. He thought it would be best to do this in a face to face meeting. I told him I would talk to you next week when you are back in the office. So when you are back we can look at our schedules and get back to him with some days/times that would work.
>
> Thanks, Matt
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 122 West 25th Street
> Herschler Building 3W
> Cheyenne, WY 82002
> 307-777-7055
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82002

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

From:	Matthew Kunze
To:	bj.kristiansen@wyo.gov; muthu.kuchanur@wyo.gov; jbarron@wwcengineering.com; Matthew Kunze
Subject:	Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (bjarne.kristiansen@wyo.gov)
Date:	Monday, August 31, 2015 10:29:29 AM
Attachments:	invite.ics

Meet with Jeff Barron on Brook Mine hydrology comments, AVF visit

more details »

When	Tue Sep 1, 2015 2pm – 3:30pm Mountain Time
Where	Big Horn Conference Room (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/matthew-kunze
Calendar	bjarne.kristiansen@wyo.gov
Who	• Matthew Kunze - organizer • muthu.kuchanur@wyo.gov • jbarron@wwcengineering.com • BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_91.ics (1436 Bytes) cannot be converted to PDF format.

From: Matthew Kunze
To: muthu.kuchanur@wyo.gov; BJ Kristiansen; jbarron@wwcengineering.com; Matthew Kunze
Subject: Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (muthu.kuchanur@wyo.gov)
Date: Monday, August 31, 2015 10:29:30 AM
Attachments: invite.ics

Meet with Jeff Barron on Brook Mine hydrology comments, AVF visit

more details »

When Tue Sep 1, 2015 2pm – 3:30pm Mountain Time

Where Big Horn Conference Room (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/matthew-kunze

Calendar muthu.kuchanur@wyo.gov

Who
- Matthew Kunze - organizer
- BJ Kristiansen
- muthu.kuchanur@wyo.gov
- jbarron@wwcengineering.com

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account muthu.kuchanur@wyo.gov because you are subscribed for invitations on calendar muthu.kuchanur@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_92.ics (1436 Bytes) cannot be converted to PDF format.

From:	Matthew Kunze
To:	jbarron@wwcengineering.com; muthu.kuchanur@wyo.gov; BJ Kristiansen; matthew.kunze@wyo.gov
Subject:	Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (matthew.kunze@wyo.gov)
Date:	Monday, August 31, 2015 10:29:32 AM
Attachments:	invite.ics

Meet with Jeff Barron on Brook Mine hydrology comments, AVF visit

more details »

When Tue Sep 1, 2015 2pm – 3:30pm Mountain Time

Where Big Horn Conference Room (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/matthew-kunze

Calendar matthew.kunze@wyo.gov

Who
- Matthew Kunze - organizer
- muthu.kuchanur@wyo.gov
- jbarron@wwcengineering.com
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this courtesy email at the account jbarron@wwcengineering.com because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at https://www.google.com/calendar/ and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_93.ics (1449 Bytes) cannot be converted to PDF format.

From:	Jeff Barron
To:	Matthew Kunze
Cc:	BJ Kristiansen; Ray Moores; Cody Wyatt
Subject:	Accepted: Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (matthew.kunze@wyo.gov)
Date:	Monday, August 31, 2015 10:37:14 AM

Matt,

I have a meeting conflict, however Ray Moores and Cody Wyatt will be attending on my behalf. Thank you for making time for this meeting. I will be providing an agenda this afternoon. Thanks again.

From:	Jeff Barron
To:	Matthew Kunze
Cc:	BJ Kristiansen; Ray Moores; Cody Wyatt
Subject:	Accepted: Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (matthew.kunze@wyo.gov)
Date:	Monday, August 31, 2015 10:37:14 AM

Matt,

I have a meeting conflict, however Ray Moores and Cody Wyatt will be attending on my behalf. Thank you for making time for this meeting. I will be providing an agenda this afternoon. Thanks again.

From:	Matthew Kunze
To:	Jeff Barron
Cc:	BJ Kristiansen; Ray Moores; Cody Wyatt; Muthu Kuchanur
Subject:	Re: Accepted: Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (matthew.kunze@wyo.gov)
Date:	Monday, August 31, 2015 10:40:46 AM

Ok Jeff, thanks. Look forward to meeting Ray and Cody tomorrow. Please meet us at the LQD office on the 3rd floor west wing of the Herschler Building. The conference room we are in is on another floor but we will first meet here.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Mon, Aug 31, 2015 at 10:36 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> Matt,
>
> I have a meeting conflict, however Ray Moores and Cody Wyatt will be attending on my behalf. Thank you for making time for this meeting. I will be providing an agenda this afternoon. Thanks again.

From:	Jeff Barron
To:	Matthew Kunze
Cc:	BJ Kristiansen; Ray Moores; Cody Wyatt; Muthu Kuchanur
Subject:	RE: Accepted: Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (matthew.kunze@wyo.gov)
Date:	Monday, August 31, 2015 10:42:12 AM

Will do! Thanks

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Monday, August 31, 2015 10:41 AM
To: Jeff Barron
Cc: BJ Kristiansen; Ray Moores; Cody Wyatt; Muthu Kuchanur
Subject: Re: Accepted: Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (matthew.kunze@wyo.gov)

Ok Jeff, thanks. Look forward to meeting Ray and Cody tomorrow. Please meet us at the LQD office on the 3rd floor west wing of the Herschler Building. The conference room we are in is on another floor but we will first meet here.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Mon, Aug 31, 2015 at 10:36 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:
Matt,

I have a meeting conflict, however Ray Moores and Cody Wyatt will be attending on my behalf. Thank you for making time for this meeting. I will be providing an agenda this afternoon. Thanks again.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Jeff Barron
To:	Matthew Kunze
Cc:	BJ Kristiansen; Ray Moores; Cody Wyatt; Muthu Kuchanur
Subject:	RE: Accepted: Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (matthew.kunze@wyo.gov)
Date:	Monday, August 31, 2015 5:03:05 PM
Attachments:	agenda09.01.15.docx

Matt,

Please find Agenda attached

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Monday, August 31, 2015 10:41 AM
To: Jeff Barron
Cc: BJ Kristiansen; Ray Moores; Cody Wyatt; Muthu Kuchanur
Subject: Re: Accepted: Invitation: Meet with Jeff Barron on Brook Mine hydrology comments, A... @ Tue Sep 1, 2015 2pm - 3:30pm (matthew.kunze@wyo.gov)

Ok Jeff, thanks. Look forward to meeting Ray and Cody tomorrow. Please meet us at the LQD office on the 3rd floor west wing of the Herschler Building. The conference room we are in is on another floor but we will first meet here.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Mon, Aug 31, 2015 at 10:36 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:
Matt,

I have a meeting conflict, however Ray Moores and Cody Wyatt will be attending on my behalf. Thank you for making time for this meeting. I will be providing an agenda this afternoon. Thanks again.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

WDEQ/LQD and RAMACO
Round 2 Coments
September 1, 2015 @ 2:00 p.m.
3rd floor West Wing Herschler Building

Agenda

Muthu Kuchanur Comments

1 (Text for overburden & Interburden)
2 (Text for depth to Coal Seems)
3 (Text for thickness and depth of monarch coal seam)
15 (testing data for alluvial materials)
30 (statistics on number of water rights, wells, permitted use etc.)
44 (ground water monitoring of alluvial material)
47 (total estimated water use) HWM uses 24,000 Gallons per Day
51 (faults)
61 (thickness of modeled layers)
97 (text tracking)

Matt Kunze Comments

1 (facilities disturbance AVF and tongue river impacts)
9 (do borelogs describe stream channel)
17 (AVF determination of Earley Creek.) Note determinations need only be done within the permit area with only some determinations occurring adjacent to the permit area as indicated by guidline 9, Adjacent means within ½ mile
21 (AVF monitoring will be added, any further concerns)
22 (goose creek should not be affected, however adding 1 well near confluence)
29 (slater creek discussion)
43 (Slater creek rating curve)
66 (reservoir monitoring)
104 (Tongue River AVF declaration) Can only make significance to farming to existing declared AVF's
105 (address predicted drawdown of Tongue River Alluvium)

From:	Jeff Barron
To:	Matthew Kunze
Subject:	ramaco data in CARF format
Date:	Tuesday, September 01, 2015 4:24:29 PM
Attachments:	CARF Data.zip image001.jpg

Matt,

Find attached the RAMACO data in CARF format.

Regards,

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

From:	Matthew Kunze
To:	Jeff Barron
Cc:	Muthu Kuchanur
Subject:	Re: ramaco data in CARF format
Date:	Wednesday, September 02, 2015 7:10:25 AM
Attachments:	image001.jpg

Thanks Jeff for the files. I will take a look at the data soon and upload it to our database.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
122 West 25th Street
Herschler Building 3W
Cheyenne, WY 82002
307-777-7055

On Tue, Sep 1, 2015 at 4:24 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> Matt,
>
> Find attached the RAMACO data in CARF format.
>
> Regards,
>
> **Jeff Barron, P.E. | Project Manager**
>
> 1849 Terra Avenue | Sheridan, WY 82801
>
> Tel 307-672-0761 | Cell 307-751-1427
>
> www.wwcengineering.com

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From: Google Calendar
To: Matthew Kunze; Matthew Kunze
Subject: Notification: Sheridan-Brook Mine Visit @ Wed Sep 23, 2015 7am - 4:30pm (matthew.kunze@wyo.gov)
Date: Wednesday, September 23, 2015 6:45:13 AM

Sheridan-Brook Mine Visit

more details »

When Wed Sep 23, 2015 7am – 4:30pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/matthew-kunze

Calendar matthew.kunze@wyo.gov

Who
- Matthew Kunze - organizer

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for notifications on calendar matthew.kunze@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Matthew Kunze; Matthew Kunze
Subject: Notification: Sheridan-Brook Mine Visit @ Thu Sep 24, 2015 7am - 7pm (matthew.kunze@wyo.gov)
Date: Thursday, September 24, 2015 6:45:04 AM

Sheridan-Brook Mine Visit

more details »

When Thu Sep 24, 2015 7am – 7pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/matthew-kunze

Calendar matthew.kunze@wyo.gov

Who
- Matthew Kunze - organizer

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for notifications on calendar matthew.kunze@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: Got time for me to update you on the Ramaco/Big Horn litigation?
Date: Monday, October 05, 2015 12:34:02 PM

Hi Andrew!

As you probably have heard, Judge Edleman denied both parties' cross-motions for summary judgment as he wants to hear testimony at trial about the meaning of "necessary and convenient". However, the mine plan has recently been altered to enhance the possibility of a new Sheridan Industrial Park that the Governor is interesting in seeing built. WDEQ is now addressing those changes. Thus, Edleman's focus may change as well.

May I come in to see you at your office to discuss both matters on either Thursday morning October 16 or Friday morning October 17? I am guest lecturing at UW law school at 1 pm on Thursday so that afternoon is out. Tom

From: andrew kuhlmann
To: Thomas Sansonetti
Subject: Re: Got time for me to update you on the Ramaco/Big Horn litigation?
Date: Sunday, October 11, 2015 7:54:22 PM

Tom,

Thanks for letting me know about the ruling. I would be happy to meet this week. Would at meeting at 10 on Thursday work? Unfortunately, I will be out of town on Friday.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
123 Capitol Building
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

On Mon, Oct 5, 2015 at 12:33 PM, Thomas Sansonetti <TLSansonetti@hollandhart.com> wrote:

> Hi Andrew!
>
> As you probably have heard, Judge Edleman denied both parties' cross-motions for summary judgment as he wants to hear testimony at trial about the meaning of "necessary and convenient". However, the mine plan has recently been altered to enhance the possibility of a new Sheridan Industrial Park that the Governor is interesting in seeing built. WDEQ is now addressing those changes. Thus, Edleman's focus may change as well.
>
> May I come in to see you at your office to discuss both matters on either Thursday morning October 16 or Friday morning October 17? I am guest lecturing at UW law school at 1 pm on Thursday so that afternoon is out. Tom

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: Re: Got time for me to update you on the Ramaco/Big Horn litigation?
Date: Sunday, October 11, 2015 9:00:07 PM

Yes that will work. See you at your office then. Tom

Sent from my iPhone

On Oct 11, 2015, at 7:54 PM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Tom,
>
> Thanks for letting me know about the ruling. I would be happy to meet this week. Would at meeting at 10 on Thursday work? Unfortunately, I will be out of town on Friday.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 123 Capitol Building
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
> On Mon, Oct 5, 2015 at 12:33 PM, Thomas Sansonetti <TLSansonetti@hollandhart.com> wrote:
>
>> Hi Andrew!
>>
>> As you probably have heard, Judge Edleman denied both parties' cross-motions for summary judgment as he wants to hear testimony at trial about the meaning of "necessary and convenient". However, the mine plan has recently been altered to enhance the possibility of a new Sheridan Industrial Park that the Governor is interesting in seeing built.

WDEQ is now addressing those changes. Thus, Edleman's focus may change as well.

May I come in to see you at your office to discuss both matters on either Thursday morning October 16 or Friday morning October 17? I am guest lecturing at UW law school at 1 pm on Thursday so that afternoon is out. Tom

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: Just a thought
Date: Monday, October 12, 2015 3:47:19 PM
Attachments: image001.gif

Hi Andrew!

Now that we are coming down to the nitty-gritty of the comment period as to the WDEQ and Wyoming AG's review of the Ramaco permit application, does it make sense for us to include any of the ultimate decision makers in our meeting on Thursday?

For instance, would either Todd Parfit and/or Alan Edwards benefit from understanding Ramaco's new business plan and current legal position?

If so, please invite them to our meeting or even to a portion of it. Tom

Thomas L. Sansonetti
Partner
Holland & Hart LLP
2515 Warren Ave Suite 450
Cheyenne, WY 82001
Phone (307) 220-1994
Fax (307) 778-8175
E-mail: TLSansonetti@hollandhart.com

CONFIDENTIALITY NOTICE: This message is confidential and may be privileged. If you believe that this email has been sent to you in error, please reply to the sender that you received the message in error; then please delete this e-mail. Thank you.

HOLLAND&HART LLP

THE LAW OUT WEST

From:	Thomas Sansonetti
To:	andrew kuhlmann
Cc:	Jeffrey S. Pope
Subject:	FW: Brook Mining/Big Horn Coal Co. - Order Denying Motion for Summary Judgment
Date:	Friday, October 16, 2015 5:59:33 PM
Attachments:	2015-09-21 Order Denying Motion for Summary Judgment.pdf image001.gif

---

Hi Andrew!

As always, I enjoyed the time we spent together yesterday.

As promised, please find attached Judge Edleman's perplexing order. I will let you know what happens at the November 23 scheduling conference.

Jeff Pope and I are going to work on a memo to you on the legal question you posed involving Padlock Ranch being a qualified agricultural entity and will try and have it to you by the end of October.

Some good news, I discovered that the proposed Sheridan Industrial Park will not be built on Big Horn Coal surface. So that takes care of one more potential problem with BHC.

The proposed industrial park is supposed to be privately held information until the governor's office announces it in conjunction with RAMACO when the permit is issued. So mum's the word.

Let me know if you need anything else. Tom

COURTESY COPY

State of Wyoming	In the District Court
County of Sheridan	Fourth Judicial District

BROOK MINING COMPANY, LLC, a Wyoming limited Liability company, and RAMACO WYOMING COAL, LLC, a Wyoming limited liability company,

Plaintiffs,

vs.

BIG HORN COAL COMPANY, a Wyoming corporation,

Defendant,

No. _____
Filed in the Office of the Clerk of the District Court of Sheridan County, WY

SEP 21 2015

Nickie Arney Clerk of Court
Deputy

Civil Action No. CV-2014-372

ORDER DENYING MOTION FOR SUMMARY JUDGMENT

THIS MATTER, came before the Court on competing Motions for Summary Judgment. The Court heard arguments from the parties on July 23, 2015. Plaintiffs, Brook Mining Company, LLC, and Ramaco Wyoming Coal, LLC, were present and represented by Tony Wendtland of Wendtland & Wendtland, LLP, and Tom Sansonetti of Holland & Hart, LLP. Defendant, Big Horn Coal Company, was present and represented by Jon Dyre of Crowley Fleck, PLLP. Having heard the arguments, reviewed submissions from the parties, and otherwise being fully advised in the premise, the Court finds as follows:

RELEVANT FACTS

Plaintiffs filed a Complaint for Declaratory Judgment on November 05, 2014, and an Amended Complaint for Quiet Title and Declaratory Judgment on January 20, 2015, requesting

this Court hear, declare, determine, order and adjudge that they own the present right, under a 1954 Deed, to go onto the land that is the subject of this dispute and to engage in and conduct all necessary coal mining activities including: designing, planning, permitting, building and using a railroad spur load out track and facility in order to remove, process and ship coal.

Plaintiffs, Brook Mining Company, LLC, and Ramaco Wyoming Coal, LLC, (collectively Brook) obtained their interests in the minerals to the land that is the subject of this dispute via a Warranty Deed executed in June 1954 (1954 Deed) wherein Sheridan-Wyoming Coal Company, Inc. (SWC), granted, conveyed, sold, and warranted all of the surface rights in the land to Big Horn Coal Company (BHC), reserving unto itself, its successors and assigns:

> [A]ll gas, oil, coal and other minerals contained in all of the above described lands, together with the right to mine, explore, drill, extract and remove the same, and including the right to use as much of the surface of said lands as may be necessary or convenient in order to enable the Grantor, its successors and assigns to mine, explore, drill, extract and remove said oil, gas, coal and other minerals. And in the event that the Grantor, its successors or assigns, shall hereafter mine, drill, explore, extract and remove gas, oil, coal, or other minerals and shall utilize any part of the surface of said lands in connection therewith…

Brook is the successor in interest to the mineral rights described above and contained in portions of Sections 9, 10, 15, 21, 22, and 27 in Township 57 North, Range 84 West, 6th P.M., Sheridan County Wyoming (Subject Lands).

Following this conveyance, BHC entered into a series of coal leases with SWC, and for over thirty years, BHC continued to purchase and mine SWC coal through leases. On May 6, 1983, SWC and BHC entered into a Release Agreement regarding the SWC coal leases. The Release Agreement provided:

> Lessor expressly consents and agrees to allow Lessee to leave intact any and all permanent structures, stockpiles, or spoil materials (referred to herein collectively

> as "structures and stockpiles") currently located in Sections 9, 10, 14, 15, 21, and the N1/2 of Section 22 of T. 57N., R. 84W., 6 P.M., as more specifically identified in Schedule D attached hereto . . .

Schedule D provides, in pertinent part,

> ENCUMBERED SURFACE
>
> Property situate in Sheridan County, Wyoming and described in the foregoing Release Agreement, refers to and identifies that property upon which Big Horn Coal Company has placed or will place permanent structures or stockpiles ...

Brook has submitted an application for a State of Wyoming Coal Mining Permit to the State of Wyoming Department of Environmental Quality, Land Quality Division seeking approval to mine the Subject Lands (the Brook Mine Plan). BHC opposes the Brook Mine Plan claiming that it encroaches on BHC's exclusive right to use the specific portion of the surface described in Schedule D to the Release Agreement and referred to as "Encumbered Surface."

Standard of Review

Motions for summary judgment come before the court pursuant to Rule 56(c) of the Wyoming Rules of Civil Procedure, which requires that

> [t]he judgment sought shall be rendered forthwith if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.

Wyo. R. Civ. P. 56 (c); *see also Redland v. Redland*, 2012 WY 148 (Wyo. 2012). "[S]ummary judgment is a drastic remedy designed to pierce the formal allegations and reach the merits of the controversy, but only where no genuine issue of material fact is present." *Rivers v. Moore, Myers & Garland, LLC*, 2010 WY 102, ¶ 10 (Wyo. 2012); *see also Braunstein v. Robinson Family Ltd. P'ship*, 2010 WY 26, ¶ 15 (Wyo. 2012). "A genuine issue of material fact exists when a disputed fact, if it were proven, would establish or refute an essential element of a cause of

action or a defense that the parties have asserted." *ORO Mgmt., LLC v. R.C. Mineral & Rock, LLC*, 2013 WY 77, ¶10 (Wyo. 2013).

The Wyoming Supreme Court has held that the "material presented to the trial court as a basis for a summary judgment should be as carefully tailored and professionally correct as any evidence which is admissible to the court at the time of trial." *Rivers v. Moore, Myers & Garland, LLC*, 2010 WY ¶ 8; *Newton v. Misner*, 423 P.2d 648, 650 (Wyo. 1967). Regardless of who would carry the burden of proof at trial, the moving party has the burden to demonstrate that there is no genuine issue of fact, and that summary judgment is proper. *Gilliland v. Steinhoefel*, 521 P.2d 1350, 1352 (Wyo. 1974).

A summary judgment motion is viewed in the light most favorable to the non-moving party, who will be given "the benefit of all favorable inferences that may fairly be drawn from the record." *Nodine v. Jackson Hole Mountain Resort Corp.*, 2012 WY 72 (Wyo. 2012). "[S]ummary judgment for a defendant is appropriate when the plaintiff 'fails to make a showing sufficient to establish the existence of an element essential to [her] case, and on which [she] will bear the burden of proof at trial.' " *Harper v. Fid. & Guar. Life Ins. Co.*, 2010 WY 89, 234 P.3d 1211, 1221 (Wyo. 2010) (*quoting Cleveland v. Policy Mgmt. Sys. Corp.*, 526 U.S. 795 (1999)).

DISCUSSION

ISSUE RE: PLAINTIFF'S MOTION FOR SUMMARY JUDGMENT

Does a dispute surrounding the meaning of the term necessary or convenient as it was used in the 1954 Deed create a genuine issue of material fact that precludes the granting of summary judgment?

PLAINTIFF'S SUBMISSIONS

Brook submits that the Court should hold, as a matter of law, that (a) Brook owns the rights under the 1954 Deed; and (b) those rights allow Brook to use BHC's surface to conduct all "necessary or convenient" coal mining activities, including designing, planning, permitting, building, and using surface structures for coal mining; and (c) the Brook Mine Plan application contains permitted uses of the surface under the 1954 Deed.

DEFENDANT'S SUBMISSIONS

BHC argues that genuine issues as to material facts exist precluding the Court from entering summary judgment. BHC specifically argues that a genuine issue of material fact exists with regard to the meaning of the term "necessary or convenient" as it was used in the 1954 Deed to describe the rights reserved with respect to the manner in which the surface of the Subject Lands may be used to mine coal.

ANALYSIS

Summary judgment is appropriate when no genuine issue as to any material fact exists and when the prevailing party is entitled to have a judgment as a matter of law. Wyo. R. Civ. P. 56(c). A genuine issue of material fact exists when a disputed fact, if it were proven, would establish or refute an essential element of a cause of action or a defense that the parties have asserted. *ORO Mgmt.*, 2013 WY 77, ¶10. Brook claims that what constitutes "necessary or convenient" use does not create a genuine issue of fact, and, even if it did, the determination of such does not establish or refute an essential claim or defense thereby rendering it a non-material fact.

With regard to contract interpretation, the Wyoming Supreme Court has held, "the meaning of specific terms and conditions and the intent of the parties generally are questions of fact to be resolved by the fact-finder." *Comet Energy Servs., LLC v. Powder River Oil & Gas Ventures, LLC*, 2008 WY 69, ¶ 12, 185 P.3d 1259, 1263 (Wyo. 2008).

In the present case, the Court is being asked to make a determination as to the meaning of a specific term, namely, the term "necessary or convenient" as it was used in the 1954 Deed. Because the Wyoming Supreme Court has determined that the meaning of specific terms in a contract involves a question of fact to be resolved by the fact finder, this is a question of fact.

In order for this fact to be deemed a material one, the fact, if proven, must establish or refute an essential element of a cause of action or a defense that the parties have asserted. Here, the cause of action is a declaratory judgment in which Brook is seeking a declaration, determination, and court order that it owns the present right under the 1954 Deed to go onto the Subject Lands and engage in and conduct all "necessary or convenient" coal mining activities. Because Brook is requesting the Court to enter a judgment declaring that it can conduct "necessary or convenient" coal mining operations on the Subject Lands, a determination as to the meaning of what constitutes "necessary or convenient" use is an essential element of Brook's declaratory judgment action. It is impossible for this Court to declare the nature and extent of Brook's rights to use the surface of the Subject Lands to conduct mining activities without also determining what use is considered "necessary and convenient."

Therefore, this Court holds that because a dispute exists as to the meaning of a phrase contained in a contract, a genuine issue of fact exists. Because Brook is requesting this Court

declare it holds rights conferred to pursuant to that phrase, there exists a genuine issue as to a fact that is material. Therefore, granting Brook's Motion for Summary Judgment is not proper.

ISSUE RE: DEFENDANT'S MOTION FOR SUMMARY JUDGMENT

Does a dispute surrounding the effect a Release Agreement had on the rights of the parties conveyed pursuant to the 1954 Deed create a genuine issue of material fact that precludes the granting of summary judgment?

DEFENDANT'S SUBMISSIONS

BHC submits that the Release Agreement is the controlling document in this case and pursuant to that document, BHC was granted the right to leave intact any and all permanent structures, stockpiles, or spoils materials placed, or to be placed in the future, on specified portions of land conveyed to BHC in the 1954 Deed. (BHC refers to the portion of land referenced in the Release Agreement as the "Encumbered Surface" and for convenience this Court will use the same reference). BHC requests this Court hold as a matter of law that pursuant to the terms in the Release Agreement (a) BHC has superior rights to the Encumbered Surface; (b) BHC has superior rights to use the surface of the Subject Lands associated with a rail spur, a shop and bridge for further coal mining activities.[1]

[1] BHC additionally requested this Court hold (c) Brook is not permitted to build a rail spur in Sections 15 and 22; (d) Brook is not permitted to use BHC's bridge; and (e) Brook is not permitted to highwall mine in Sections 15 and 22. The question as to each of these rights can be resolved by a decision as to what "necessary or convenient" use means, and pursuant to the above conclusion – will not be disposed of via summary judgment.

PLAINTIFF'S SUBMISSIONS

Brook submits that the 1954 deed is the controlling document in this case, and the Release Agreement was crafted to work with and subject to that Deed – not to change it, or to limit the rights conveyed therein.

ANALYSIS

BHC claims the Release Agreement, not only limits the rights conveyed to Brook via the 1954 Deed, but grants BHC superior rights with regard to the Encumbered Surface. In support of this contention BHC cites Schedule D to the Release Agreement where it describes "that property on which BHC has placed **or will place** permanent structures or stockpiles and is described as follows . . ." (Emphasis added). BHC claims pursuant to this language, it was given the right to use any and all of the Encumbered Surface, including the unlimited right to add additional permanent structures, spoils and stockpiles in the future.

Brook argues that the Release Agreement does not conflict with the rights granted in the 1954 Deed. Brook claims that the "will place" language as used in Schedule D to the Release Agreement only refers to overburden that BHC planned to move around as it completed certain mining activities and reclamation, and that it does not give BHC a perpetual, superior right allowing it to build unknown indefinite future projects.

Imploring the same analysis utilized above, because the parties' dispute the meaning of a phrase contained in a contract, this Court concludes a genuine issue of fact exists. This fact is made material because an interpretation of the phrase would refute or establish an essential element of a cause of action or defense, namely: the respective rights of the parties with regard to use of the land. Therefore, a genuine issue as to a material fact exists precluding summary

judgment on this issue. Moreover, BHC, who requested this Court determine that the Release Agreement was the controlling document and that it granted them superior rights, even conceded in its brief that "[a]t a minimum, the 1983 Release Agreement creates issues of fact which defeat Plaintiff's Motion for Summary Judgment."

CONCLUSIONS

The Court finds that genuine issues as to material facts exist and therefore summary judgment is not proper.

FOR THE ABOVE STATED REASONS, the competing Motions for Summary Judgment are hereby DENIED.

ORDERED BY THE COURT this 21st day of September, 2015.

Clerk of District Court. The above is a true and correct copy of the original instrument which is on file or of record in this court.
Done this 21 day of Sept 20 15
Nickie Arney Clerk
By Julie Thurston Deputy

WILLIAM J. EDELMAN
DISTRICT JUDGE

Copies to:

Anthony T Wendtland
Wendtland & Wendtland, LLP
2161 Coffeen Ave., Suite 301
Sheridan, WY 82801

Thomas L. Sansonetti
Holland & Hart, LLP
2515 Warren Avenue
Cheyenne, WY 82001

Jon T Dyre
Crowley Fleck PLLP
PO Box 2529
Billings, MT 59103-2529

Lynne Boomgaarden
Crowley Fleck PLLP
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009

From:	Matthew Kunze
To:	BJ Kristiansen; Kim Medina; Muthu Kuchanur
Subject:	Proposed Brook Mine - TFN 6 2/025 - CHIA Site Inspection Report
Date:	Wednesday, October 21, 2015 1:12:55 PM
Attachments:	CHIA 39 Site Inspection Report.pdf

Please find the attached report. As a note to Bj and Kim - I described some of the water right history associated with that failed dam we found on Slater Creek. This along with an associated ditch was apparently an early 1900s attempt to irrigate lands adjacent to Slater Creek within the proposed Brook Mine permit boundary.

Also - Just noticed I put September 24, **2014** in my cover letter, but I corrected this in the hard copy that will be mailed out...sorry.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matthew H. Mead, Governor

Todd Parfitt, Director

October 21, 2015

Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Cumulative Hydrologic Impact Assessment (CHIA) Site Inspection Report Brook Mine – New Coal Permit Application (TFN 6 2/025)

Dear Mr. Atkins:

Enclosed is a copy of the above referenced report. The Land Quality Division (LQD) conducted this site inspection on September 24, 2014 with the assistance of Mr. Cody Wyatt of WWC Engineering.

If you find any incorrect statements, please respond *in writing* so your comments may become part of the file.

Sincerely,

Matt Kunze
Land Quality Division

Attachment
cc: TFN 6 2/025, with attachment
CHIA 39 file, with attachment
Bj Kristiansen (electronic copy of attachment)
Kim Medina (electronic copy of attachment)
Muthu Kuchanur (electronic copy of attachment)

COAL MINE
INSPECTION REPORT

Wyoming Department of Environmental Quality, Land Quality Division
2100 West 5th Street Sheridan, WY 82801
Phone: (307) 673-9337 FAX: (307) 672-2213

Permit Number:	6 2/025	**Permittee:**	BROOK MINING CO LLC
Inspection Date:	9/23/2015	**Inspector(s):**	
Report Date:	10/21/2015	**Participant(s):**	Bj Kristiansen, Wyoming DEQ/LQD Kim Medina, Wyoming DEQ/LQD Cody Wyatt, WWC Engineering
Last Inspection:	Not Found	**Current Bond:**	$0
Inspection Reason(s):	Initial/Preliminary/Base line	**Field Conditions:**	
		Approval Date:	

Status:	Inactive	**Approved Acreage:**	
County:	Sheridan	**Mineral:**	Coal

Opening Comments

See attached report

Inspection Summary Comments

See attached report

Inspection Recipient and Attachment Information

Recipient	Email	Address/Notes
Operator	No	BROOK MINING CO LLC

Attachment Types: ☐ Photo Addendum ☐ Map(s) ☐ Table(s) ☐ Other

Attachment Notes

Type	FileName	Size (MB)	# Pages
Cover Letter	Cover Letter_CHIA 39 Site Inspection Report.pdf	0.36	1
Attachment	CHIA 39_Brook Mine Permit Application_Site Inspection Report_Sept2015.pdf	2.61	14

CHIA Site Inspection Report
Brook Mine – New Coal Permit Application (TFN 6 2/025) - WDEQ-CHIA 39

TO:	Brook Mine Permit Application (TFN 6 2/025) CHIA 39 File
FROM:	Matt Kunze, Division Services
DATES OF INSPECTION:	September 23-24, 2015
DATE OF REPORT:	October 21, 2015
PARTICIPANTS:	Matt Kunze, Wyoming DEQ/LQD (September 23-24) Bj Kristiansen, Wyoming DEQ/LQD (September 24) Kim Medina, Wyoming DEQ/LQD (September 24) Cody Wyatt, WWC Engineering (September 24)

Introduction

On September 23-24, 2015, a site inspection was made to examine hydrologic features within and adjacent to the proposed Brook Mine. The Brook Mine is a new coal mine proposed by Brook Mining Co., LLC. The proposed mine is located east of the Bighorn Mountains in north central Sheridan County, approximately six miles south of the Wyoming-Montana Border and eight miles northwest of Sheridan (**Figure 1**). The proposed Brook Mine permit would encompass 4,548.8 acres, with approximately 81 percent of the permit acreage approved to be affected by mining. The entire proposed permit area is held under private surface ownership (Brook Mine Permit Application, 2015).

The Brook Mine proposes to conduct both highwall and surface coal mining of the Monarch, Upper Carney, Lower Carney, Carney, and Masters coal seams of the Fort Union Formation, Tongue River Member (Brook Mine Permit Application, 2015). All coal to be mined is held under private ownership by Brook Mining Co., LLC or is leased to the Brook Mine by private entities. Highwall mining would be the primary mining method, and would consist of initially constructing a trench to create a working area for a continuous miner system. The continuous miner would be remotely operated to mine coal perpendicular to the trench. The coal would be transported from the continuous miner back to the surface by conveyance cars where it would then be stockpiled in the trench for later transport by loaders and trucks. Surface mining would be used in areas of low strip ratios using dozer push methods. Additional surface mining methods such as contour, trench, and open cast mining would be used to expose the highwall for mining by the continuous miner. Mining at the Brook Mine would occur over a 12-year period beginning in year 2016 and ending in 2027. Reclamation activities would occur from 2028 through 2031 (Brook Mine Permit Application, 2015).

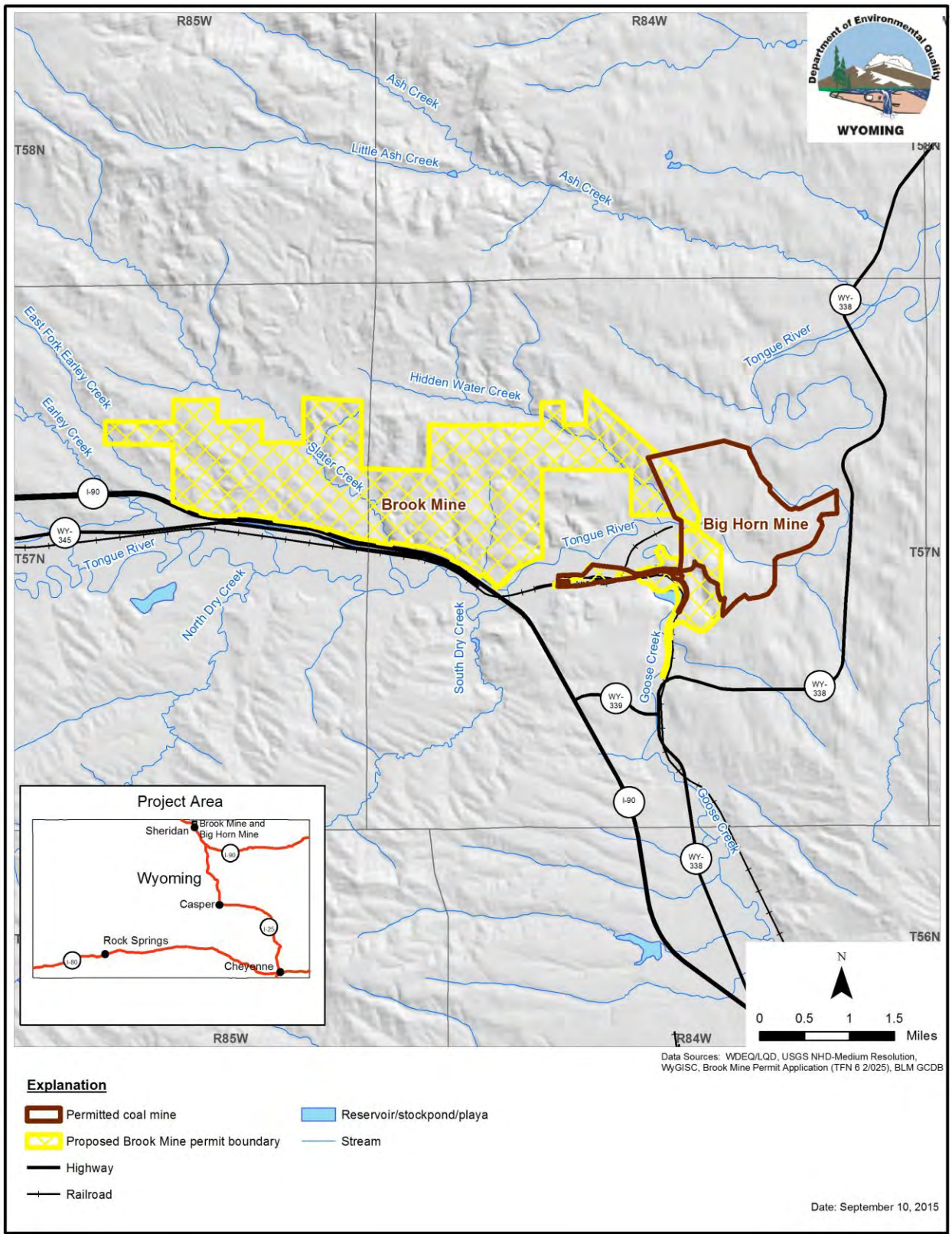


Figure 1. Location of the proposed Brook Mine and existing Big Horn Mine.

This inspection will support the Cumulative Hydrologic Impact Assessment (CHIA) for the proposed Brook Mine (WDEQ-CHIA 39). The CHIA will evaluate the probable hydrologic impacts of the proposed mine and the potential for the mine to cause material damage to the hydrologic balance outside the mine permit area. The proposed Brook Mine is adjacent to the Big Horn Mine (**Figure 1**), which holds an active mining permit with the WDEQ/LQD but is no longer mining and has been in reclamation for over 15 years. With the exception of 24.2 acres of facilities area, including a shop, loadout area, and rail spur, the remaining Big Horn Mine permit area has been permanently reclaimed and fully bond released. The WDEQ/LQD anticipates that the Big Horn Mine will not need to be explicitly considered in the Brook Mine CHIA given its reclamation/bond release status and the absence of hydrological impacts. The WDEQ/LQD also anticipates that the proposed Brook Mine will be determined to be hydrologically isolated from other active coal permits in the upper Tongue River Basin further downstream in Wyoming and Montana.

Matt Kunze of the WDEQ/LQD Cheyenne office attended both days of the trip. On September 24, Bj Kristiansen and Kim Medina of the WDEQ/LQD District III office in Sheridan attended for the purposes of an alluvial valley floor (AVF) site inspection of Slater Creek within the proposed Brook Mine permit boundary. Cody Wyatt of WWC Engineering also attended on September 24, as WWC Engineering is the consultant responsible for preparing the Brook Mine permit application.

Afternoon of September 23 – General Area Vehicle Tour

On the afternoon of September 23, a vehicle tour was conducted of the general area of the proposed Brook Mine. The tour only included areas visible from public roads. The primary drainages within and adjacent to the proposed Brook Mine include East Fork Earley Creek, Slater Creek, Hidden Water Creek, Goose Creek, and the Tongue River (**Figure 1**). Goose Creek and the Tongue River are large perennial streams, while Slater Creek is an intermittent to perennial stream and East Fork Earley Creek and Hidden Water Creek are smaller ephemeral streams. Only portions of Goose Creek, the Tongue River, and Slater Creek were observed during the tour since these streams were visible from public roads; Hidden Water Creek and East Fork Early Creek have no apparent public access.

Goose Creek

Goose Creek was viewed from the State Highway 339 crossing (**Figure 2**). Goose Creek is adjacent to the proposed Brook Mine permit boundary (**Figure 1**). The main channel would not be within the permit boundary with the exception of where the BNSF rail line crosses the channel. Historical surface coal mining has occurred within and adjacent to Goose Creek, including at the reclaimed Plachek Pit from which Goose Creek has flowed through since 1962 (Vinikour, 1980). In 2000, Goose Creek was placed on Wyoming's Section 303(d) list for impaired water quality due to fecal coliform, habitat alterations, and sediment (Wyoming Department of Environmental Quality, 2015). In 2010, a Total Maximum Daily Load (TMDL) was prepared for Goose Creek to address the water quality impairment (SWCA Environmental Consultants, 2010). Data from surface water monitoring stations maintained by the USGS (Station No. 06305700-*Goose Creek near Acme, WY*) and the Big Horn Mine (GC00-78) will

likely be used in the CHIA to characterize baseline water quantity and water quality of Goose Creek.

Figure 2. Goose Creek at State Highway 339 crossing. Photo facing downstream (north).

Tongue River

The Tongue River was viewed from the Acme Road crossing (**Figure 3**). The Tongue River is adjacent to the proposed Brook Mine permit boundary and is only included in the permit boundary where the river crosses beneath a road (**Figure 1**). Water quality in the Tongue River generally declines downstream of the confluence with Goose Creek, and in 2002 a segment of the Tongue River downstream from the confluence with Goose Creek to the Wyoming-Montana state line was added to Wyoming's Section 303(d) list for impaired water quality due to elevated temperature (Wyoming Department of Environmental Quality, 2015).

The Big Horn Mine's TR0176 gaging station was observed on the left bank downstream of the Acme Road crossing (**Figure 3**). This station serves as the mine's upstream surface water monitoring station on the Tongue River and data from the station may be used in the CHIA. Data from another station that the Big Horn Mine uses to monitor the Tongue River downstream of the mine (TR2B80) may also be presented in the CHIA. Additional data from a USGS station on the Tongue River (Station No. 06299980-*Tongue River at Monarch, WY*) (**Figure 4**) may also be used in the CHIA. This station is located approximately one mile upstream from the Big Horn Mine's TR0176 station.

Figure 3. Tongue River at the Acme Road crossing. The Big Horn Mine's TR0176 gaging station is shown on the left bank. Photo facing downstream (east).

Figure 4. USGS Station No. 06299980 – Tongue River at Monarch, WY. Photo facing upstream (west).

Slater Creek

Slater Creek is one of the primary drainages that flows through the central part of the proposed Brook Mine permit area (**Figure 1**). Immediately downstream of the proposed permit boundary, Slater Creek flows through a large culvert underneath Interstate 90 (**Figure 5**). The culvert outlet was viewed from State Highway 345. At the time of the site visit, water was discharging to Slater Creek from the Tongue River Ditch. The Tongue River Ditch provides irrigation water for several hundred acres in the Tongue River valley (Wyoming State Engineer's Office, 2015a). It was unknown if the water entering Slater Creek from the ditch was being used for irrigation further downstream or if unused water was being returned to the Tongue River. The confluence of Slater Creek and the Tongue River is approximately 0.25 miles downstream from the culvert location. The USGS also maintained a peak flow gage on Slater Creek near this location from 1967-1981 (Station No. 06299900 – *Slater Creek near Monarch, WY*). Data from the peak flow gage will likely be used in the CHIA.

Figure 5. Slater Creek at the culvert outlet under Interstate 90. Water from the Tongue River Ditch was discharging into Slater Creek (left). Photo facing upstream (north).

Morning of September 24 – AVF Reconnaissance of Slater Creek

On the morning of September 24, staff from LQD and WWC Engineering walked Slater Creek to evaluate potential alluvial valley floor (AVF) characteristics. A separate AVF site inspection report will be written by Bj Kristiansen. All proper landowner permissions were obtained prior to entering the area.

The group parked near a recently constructed low-water crossing of the stream and then walked up to a hillside spring located on the left side of the Slater Creek valley in T57N, R85W,

Section 12 (**Figure 6**). The Brook Mine permit application generally describes the presence of seeps and springs in this location. The springs result from water seeping out from the contact of the discontinuous saturated clinker knobs and the low permeable clay below the clinker (Brook Mine Permit Application, 2015). Appendix D-10 (Wetlands) of the permit application identifies the spring area as containing a palustrine emergent wetland of 0.4 acres (Brook Mine Permit Application, 2015). During the site visit, the contact of the spring was observed to contain cattails and other hydrophytic vegetation (**Figure 7**). A small amount of standing water was also present and two separate flowpaths were observed down the hillside towards Slater Creek (**Figure 6**). The flowpaths were walked but eventually the water went subsurface and the hydrophytic vegetation disappeared prior to reaching the Slater Creek channel.

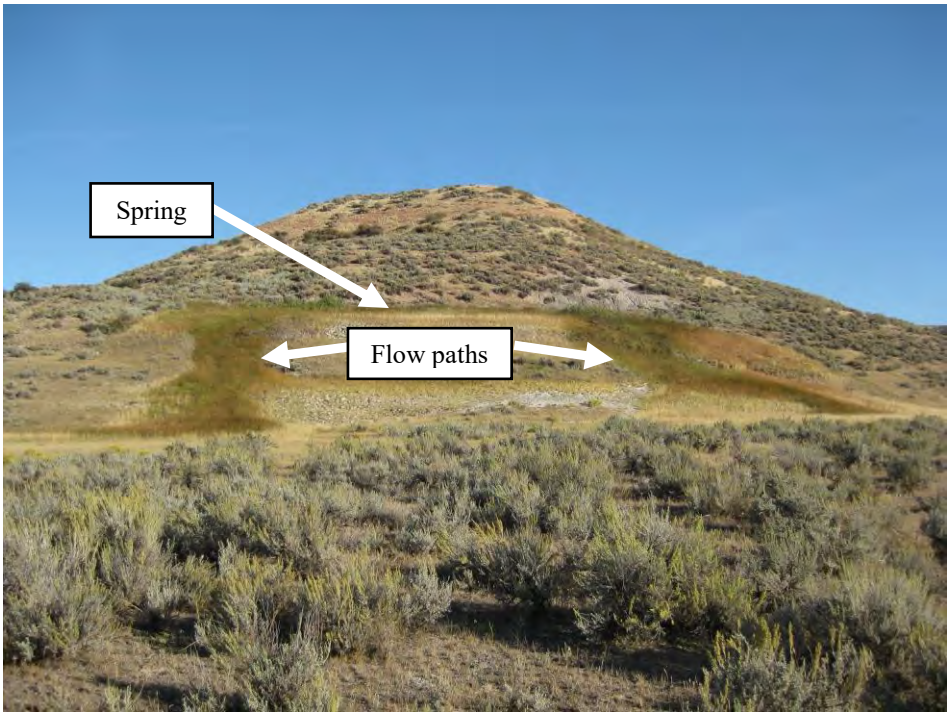


Figure 6. Hillside spring and flowpaths near Slater Creek in T57N, R85W, Section 12 within the proposed Brook Mine permit boundary. Photo facing upstream (north).

Slater Creek was observed immediately downstream of the northern proposed permit boundary (**Figure 8**). This part of the channel resides in a wider, flatter valley and has subirrigation present (**Figure 8**). Immediately upstream of the proposed permit boundary are irrigated hayfields on private land. An unnamed tributary to Slater Creek drains the hayfield and was observed to have standing water present and subirrigation (**Figure 9**).

Figure 7. Presence of cattails and other hydrophytic vegetation at the hillside spring in T57N, R85W, Section 12 within the proposed Brook Mine permit boundary. Photo facing northeast.

Figure 8. Slater Creek near the north end of the proposed Brook Mine permit boundary. Photo facing downstream (south).

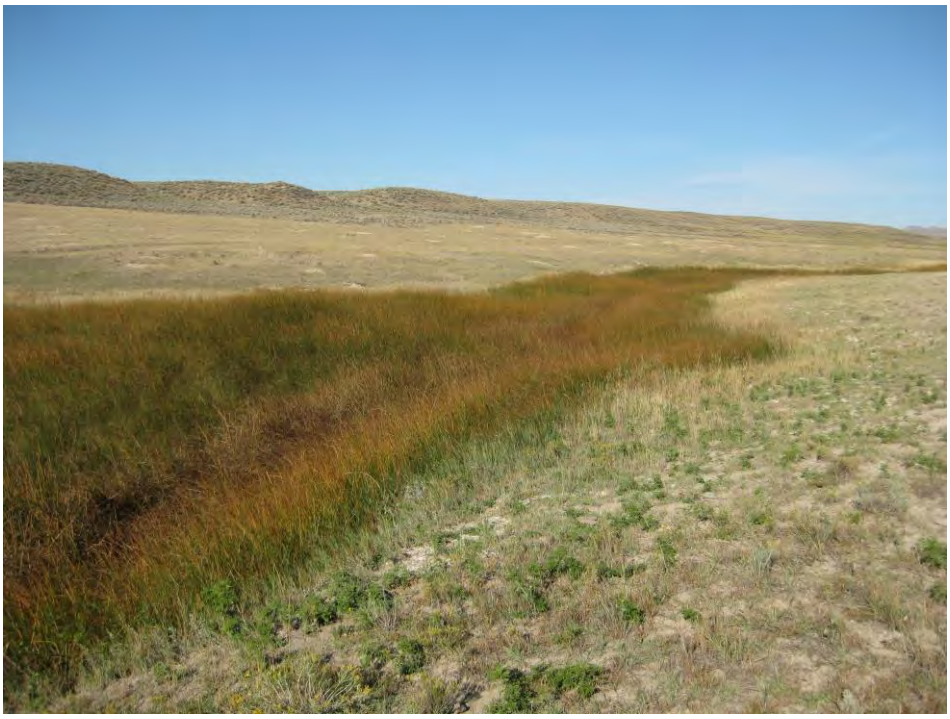


Figure 9. Tributary to Slater Creek that drains the irrigated hayfield upstream of the proposed Brook Mine permit boundary. Photo facing upstream (northwest).

Approximately 300 feet downstream of the confluence of the unnamed tributary and Slater Creek, a small pond with adjacent wetlands is present on Slater Creek (**Figure 10**). Nearly immediately downstream of the pond is the dam for the abandoned Conable Reservoir (**Figure 11**). According to the Wyoming State Engineer's Office Water Rights Database, a water right for Conable Reservoir was granted in 1901 (Wyoming State Engineer's Office, 2015b). The purpose of the reservoir was to store water for irrigation of lands under the Conable Ditch and Lateral, which also held a water right to divert 1.46 cfs (Wyoming State Engineer's Office, 2015c). The water right allowed for using the water for irrigation of 100 acres of land adjacent to Slater Creek in T57N, R85W, Section 13. Both water rights were cancelled in 1906, and it is unknown the extent that the irrigation was ever developed. The dam for the reservoir has long since failed (**Figure 11**), allowing Slater Creek to flow freely through. The only other related structures observed during the site visit was an accompanying ditch and/or spreader dike berm system located on the left bank of Slater Creek adjacent to the failed dam. However these structures do not match the location of the Conable Ditch and Lateral shown in the Wyoming State Engineer's Office Water Rights Database. It appears from the cancelled water rights and evidence in the field that there was some historical attempt to irrigate lands adjacent to Slater Creek within the proposed Brook Mine permit area, but for whatever reason, the attempt failed and was abandoned. The only area of active irrigation of the valley floor of Slater Creek is immediately upstream of the proposed permit boundary. The geomorphology of the stream and valley in this area appear to be more conducive to irrigation than the area within the most of the proposed Brook Mine permit boundary.

Figure 10. Small pond and associated wetlands on Slater Creek. Photo facing southeast.

Figure 11. Failed dam for Conable Reservoir on Slater Creek. Photo facing northwest.

Approximately 300 downstream of the failed dam is the Brook Mine's SM578512-SW-1 surface water monitoring station (**Figure 12**). This station serves as the upstream monitoring point on Slater Creek for the proposed mine. Data from the station will likely be used in the CHIA.

Figure 12. Slater Creek downstream of the failed dam for Conable Reservoir, showing the Brook Mine's SM578512-SW-1 surface water monitoring station. Photo facing downstream (southeast).

Slater Creek was walked downstream of the recently constructed low-water crossing to where the channel enters T57N, R85W, Section 13. The channel morphology in this location began to change from what was observed Section 12. The channel is this area is much more incised and disconnected from the adjacent floodplain, although riparian woodland vegetation is present (**Figure 13**). The channel was dry in this location at the time of the visit. Walking further downstream, the channel characteristics were mostly similar (**Figure 14**), although pools with standing water were occasionally found. Further downstream near the southern end of the proposed permit boundary, a small amount of water was found to be flowing in the channel. The location of the Brook Mine's SM578418-SW-1 surface water monitoring station was observed (**Figure 15**). This station serves as the downstream monitoring point on Slater Creek for the proposed mine. Data from the station will likely be used in the CHIA.

Figure 13. Slater Creek in T57N, R85W, Section 13. The channel was incised and no water was present in this location.

Figure 14. Slater Creek in T57N, R85W, Section 13. The channel was incised and no water was present in this location.

Figure 15. Brook Mine surface water monitoring station SM578418-SW-1 on Slater Creek near the downstream permit boundary. A small amount of water was flowing at this location. Photo facing upstream (north).

References

Brook Mine Permit Application, 2015, Brook Mining Co., LLC, WDEQ/LQD TFN 6 2/025, Wyoming Department of Environmental Quality, Land Quality Division, Cheyenne, Wyoming.

SWCA Environmental Consultants, 2010, Final Goose Creek Watershed TMDLs, Prepared for Wyoming Department of Environmental Quality, http://deq.state.wy.us/wqd/watershed/Program%20Documents/TMDL-Carry%20Over%20to%20New%20Site/2.%20Completed%20Projects/Goose%20Creek%20Final%20TMDLs%20Sept%202010_v2.pdf, 201 pp.

Vinikour, W. S., 1980, Biological consequences of stream routing through a final-cut Strip mine pit: Benthic macroinvertebrates, Hydrobiologia 75: 33-43.

Wyoming Department of Environmental Quality, 2015, Wyoming's 2014 Integrated 305(b) and 303(d) Report, Draft, July 2015, Wyoming Department of Environmental Quality, Water Quality Division, Watershed Section, Document #15-0665, http://deq.wyoming.gov/media/attachments/Water%20Quality/Water%20Quality%20Assessment/Reports/Wyomings-2014-Integrated-305b-and%20303d-Report-2nd-Draft.pdf, 185 pp.

Wyoming State Engineer's Office, 2015a, Tongue River Ditch (Enl. of) Enlargement of Tongue River Ditch Co's. Ditch, P1552.0E, Wyoming State Engineer's Water Rights Database, Cheyenne, WY.

Wyoming State Engineer's Office, 2015b, Conable Reservoir, P223.0R, Wyoming State Engineer's Water Rights Database, Cheyenne, WY.

Wyoming State Engineer's Office, 2015c, Conable Ditch and Lateral, P3088.0D, Wyoming State Engineer's Water Rights Database, Cheyenne, WY.

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Proposed Brook Mine - TFN 6 2/025 - CHIA Site Inspection Report
Date: Wednesday, October 21, 2015 1:49:05 PM

Yay, thanks Matt. I really appreciate your involvement with this.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, October 21, 2015 1:13 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>; Kim Medina <kim.medina@wyo.gov>; Muthu Kuchanur <muthu.kuchanur@wyo.gov>
Subject: Proposed Brook Mine - TFN 6 2/025 - CHIA Site Inspection Report

Please find the attached report. As a note to Bj and Kim - I described some of the water right history associated with that failed dam we found on Slater Creek. This along with an associated ditch was apparently an early 1900s attempt to irrigate lands adjacent to Slater Creek within the proposed Brook Mine permit boundary.

Also - Just noticed I put September 24, **2014** in my cover letter, but I corrected this in the hard copy that will be mailed out...sorry.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Muthu Kuchanur
To: Matthew Kunze
Subject: Section 1.2 - Brook Mine CHIA
Date: Thursday, October 22, 2015 11:51:26 AM

Matt,

I have posted Section 1.2 in F:\Division\LQD\Shared Area\MKunze\CHIA\CHIA 39_Brook Mine\GW_Support_Work

Thanks,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82001

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

From: Matthew Kunze
To: Muthu Kuchanur
Subject: Re: Section 1.2 - Brook Mine CHIA
Date: Thursday, October 22, 2015 11:57:48 AM

Ok thanks Muthu, I will take a look soon.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Thu, Oct 22, 2015 at 11:51 AM, Muthu Kuchanur <muthu.kuchanur@wyo.gov> wrote:

> Matt,
>
> I have posted Section 1.2 in F:\Division\LQD\Shared Area\MKunze\CHIA\CHIA 39_Brook Mine\GW_Support_Work
>
> Thanks,
> Muthu
>
> ---
>
> Muthu Kuchanur, Ph.D., P.E.
>
> Geology Supervisor,
> Division Services - Land Quality Division,
> Wyoming Department of Environmental Quality,
> Cheyenne - 82001
>
> Phone: 307-777-7132
> Email: muthu.kuchanur@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Muthu Kuchanur
Subject:	Brook Mine data in database
Date:	Thursday, October 22, 2015 4:04:26 PM

Muthu,

I have uploaded the baseline data that WWC Engineering sent us to the database and put a copy of the database at: F:\Division\LQD\Shared Area\MKunze\CHIA\CHIA 39_Brook Mine\Database.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: bj kristiansen
To: matthew.kunze@wyo.gov; bj.kristiansen@wyo.gov
Subject: I shared "Round 2 Technical Review Responses" with you in OneDrive
Date: Wednesday, October 28, 2015 1:15:20 PM

The Brook Mine Round 2 Responses, initializing round 3.

Round 2 Technical Review Responses

There are 11 items in this folder.
You can add this folder to your own OneDrive. Learn how.

View in OneDrive

Free online storage for your files. Check it out.
Get the OneDrive mobile app. Available for Android | iOS | Windows

Microsoft respects your privacy. To learn more, please read our Privacy Statement.
Microsoft Corporation, One Microsoft Way, Redmond, WA, 98052

From:	Matthew Kunze
To:	BJ Kristiansen
Cc:	Muthu Kuchanur
Subject:	Re: Brook Mine Round 2 responses
Date:	Wednesday, October 28, 2015 1:33:18 PM
Attachments:	image003.jpg

Muthu,

I was able to download all the files and put them at:

F:\Division\LQD\PERMITS\TFN 6 2-025 Brook Mine\Round 2 Responses to Comments recd 10-16-15

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Oct 28, 2015 at 1:26 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Ok thanks Bj...yes it went to spam, but I am now downloading the whole thing from OneDrive...still downloading but I will let you know if anything went wrong.
>
> Matt
>
> ---
>
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 200 West 17th Street, Lower Level
> Cheyenne, WY 82002
> 307-777-7055
>
> On Wed, Oct 28, 2015 at 1:17 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
>> Gentlemen,
>>
>> I am having trouble connecting to the Cheyenne server to put the latest Brook mine Round 2 responses on the server. I have placed the folder containing the documents on my Microsoft OneDrive. I have extended an invitation to you to gain access to this cloud drive. If you don't see anything within the next 10 minutes, check your spam folder. Some of the state servers block stuff from Microsoft. Let me know if anything goes wrong.

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Brook Mine D6 Tables D6.1-14 and Table D6.1-15
Date: Wednesday, October 28, 2015 2:06:00 PM

Bj,

I noticed our hard copy did not contain the new tables for Big Horn Mine Hidden Water Creek data. So I am going to print these from the PDF version and see if Jennifer can insert. So you may want to check your hard copy also.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	David Myers
To:	BJ Kristiansen
Subject:	TFN 5 6/221 RER Bear Lodge
Date:	Wednesday, October 28, 2015 2:11:49 PM
Attachments:	Bear Lodge - TFN5_6_221 First Round Review DJM.docx

---

Review attached. I am impressed with the thoughroughness of the plan. I have very few comments. Unrelated to my requests for review, I would like to know how they intend to demonstrate industrial use of the pit lake, or how LQD would ever be able to do full bond release with the lake being left as a permanent impoundment. When you have future meetings related to the leaving of the pit lake, I'd love to attend if at all possible.

Thanks,

Dave

David J. Myers
Natural Resources Analyst
WDEQ / LQD District III
2100 West 5th St.
Sheridan, WY 82801
(307) 675-5614

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: File: TFN 5 6/221
FROM: David J. Myers – LQD DIII Natural Resources Analyst
DATE: October 28, 2015
SUBJECT: First Round Review of Brook Mine New Permit Application

As requested I have reviewed the new Rare Earth Elements Bear Lodge permit application (TFN 5 5/221). I have reviewed Appendix D1 (Land Use), Appendix D5 (Topography), Appendix D6 (Hydrology - Surface), Appendix D6-B (Hydrology Addenda), Appendix D9 (Wildlife), Appendix D10 (Wetlands), the Mine Plan, the Mine Plan Exhibits, and the Reclamation Plan. My observations are below.

Appendix D1-Land Use

I have no comments on this Appendix

Appendix D5-Topography, Geology and Overburden Assessment

I have no comments on this Appendix

Appendix D6-Hydrology

I have no comments on this Appendix

Appendix D-6B – Hydrology Addenda

I have no comments on this Appendix

Appendix D9-Wildlife

It appears that RER conducted incidental herptile observations for the access route and Upton plant site as requested by the Wyoming Game & Fish Department in the letter reprinted on page D9-2-89. However the information on page D9-2-28 does not make this clear. Please update this information to reflect how RER responded to the request by Game & Fish.

Appendix D10-Wetlands

I have no comments on this Appendix

Mine Plan

I have no comments on the Mine Plan

Reclamation Plan

I have no comments on the Reclamation Plan

From: Matthew Kunze
To: Carol Bilbrough
Subject: TFN 6 2/025 - file
Date: Thursday, October 29, 2015 9:02:23 AM

Carol,

Can I grab this file when you get a chance.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: Carol Bilbrough
Subject: Re: TFN 6 2/025 - file
Date: Thursday, October 29, 2015 12:11:26 PM

Natasha said she got the OK to unlock your office so I was able to grab the file and see what I needed to...it is back in your office again.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Thu, Oct 29, 2015 at 9:02 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Carol,
>
> Can I grab this file when you get a chance.
>
> Thanks, Matt
>
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 200 West 17th Street, Lower Level
> Cheyenne, WY 82002
> 307-777-7055
>

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Brook Mine Permit Application, TFN 6 2/025, Round 2 responses and Round 3 comments
Date: Tuesday, November 03, 2015 8:17:21 AM
Attachments: MDK_Third Round Review on Brook Mine New Permit Application_TFN 6 2-025.docx
image002.jpg

Bj,

I've attached my review. Many comments were addressed but there are still some remaining and a few new ones that arose based on this round. I asked them to revise the description of Slater Creek as an ephemeral stream. They also updated the affected area boundary in several exhibits but did not state if the affected area acreage increased, so I have a comment on needing to update Form 1 if this is the case. If there is anything in my review you want to talk about before sending, please let me know.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Mon, Oct 19, 2015 at 2:43 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

Associates,

The RAMACO Coal Mine Permit Application Round 2 Comment Responses was received in the LQD District III Office on Friday, October 19, 2015. Please review your Round 2 Comments with their responses and send me any new comments no later than Friday, November 6, 2015. The Round 3 comments must be postmarked by Sunday, November 15, 2015. Obviously, the material must be ready by no later than Friday, November 13th but, with Veterans Day and weekends, the reviews need to be completed ASAP.

I am reprinting the original review assignments to assist you in examining those portions of the original document you have been working with.

VOLUME	SECTION	DESCRIPTION	ASSIGNED STAFF
Volume I and II		Adjudication	Bj Kristiansen
Volume III	Appendix D1	Land Use	Dave Myers, Dave Schellinger
	Appendix D2	History	Bj
	Appendix D3	Archeological Resources	N/A
	Appendix D4	Climatology	Dave Myers
Volume IV	Appendix D5	Topography	Dave Myers
		Geology	Bj, Kim Medina

		Overburden Assessment	Dave Schillinger
Volume V	Appendix D6	Hydrology-surface Hydrology-groundwater **CHIA**	Dave Myers, Matt Kunze Muthu Kuchanur, Bj, Kim Medina Matt Kunze, Muthu Kuchanur
Volume VI	Appendix D7	Soil Resources Assessment	Dave Schellinger
Volume VII	Appendix D8	Vegetation	Stacey Page, Jamie Jakes
Volume VIII	Appendix D9	Wildlife	Finished
Volume IX	Appendix D10	Wetlands	Finished
Volume X	Appendix D11	AVF	Dave Myers, Myself
Volume XI	Appendix D11	Mine Plan	Staff
Volume XII	Appendix D12	Reclamation Plan	Doug Emme - Reclamation Bond Staff

Please contact me if there is a problem with the review and we can work out alternative schedules, if necessary. The documents are in the library at this moment. I am also going to receive an electronic copy of all the permit components, including narrative and maps, and I will make that available on the server for those who prefer to examine the document electronically.

Let me know if this email is appropriately formatted. The Gmail viewer in Internet Explorer and Chrome may not work with the table inserted above. You will be getting a paper copy of the assignments within the next 2 days so that should help with clarity.

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Matt Kunze, LQD Division Services

DATE: November 3, 2015

SUBJECT: Third Round Comments on Brook Mine Permit Application (TFN 6 2/025)

Responses to second round comments on the Brook Mine permit application (TFN 6 2/025) were received by the Cheyenne LQD on October 23, 2015. The following is a review of the responses to my second round comments on the application.

Appendix D6-Hydrology

Section D6.1.2 Drainage Basin Description

Comment MK 29. Response not accepted. The additional discussion on the hydrology of Slater Creek was included as requested. However, based on observations from the AVF reconnaissance site visit to Slater Creek on September 24, 2015, Slater Creek should not be characterized as an ephemeral stream. At the time of the site visit, standing water and a small amount of flow was observed in the channel, particularly in Section 12. This flow was observed during a dry period when no precipitation had occurred previously. Therefore the flow was due to some other source besides direct response to precipitation. The permit application indicates that some discharge to Slater Creek occurs from infiltration of precipitation into high perched scoria burn above the stream channel; this water is stored and slowly released to Slater Creek. It appears that this flow may form a shallow water table that provides baseflow to the channel.

In my opinion Slater Creek is better described as an intermittent stream with a few isolated reaches that may be perennial. Please revise any text in the permit application that describes Slater Creek as an ephemeral stream (Page D6-2-Section D6.1.2, Page D6-11-Section D6.1.5.2, Page D6-11-Section D6.1.5.3, Page RP-45-Section RP.8.5.2). (MDK)

Section D6.1.3.2 Flood Studies

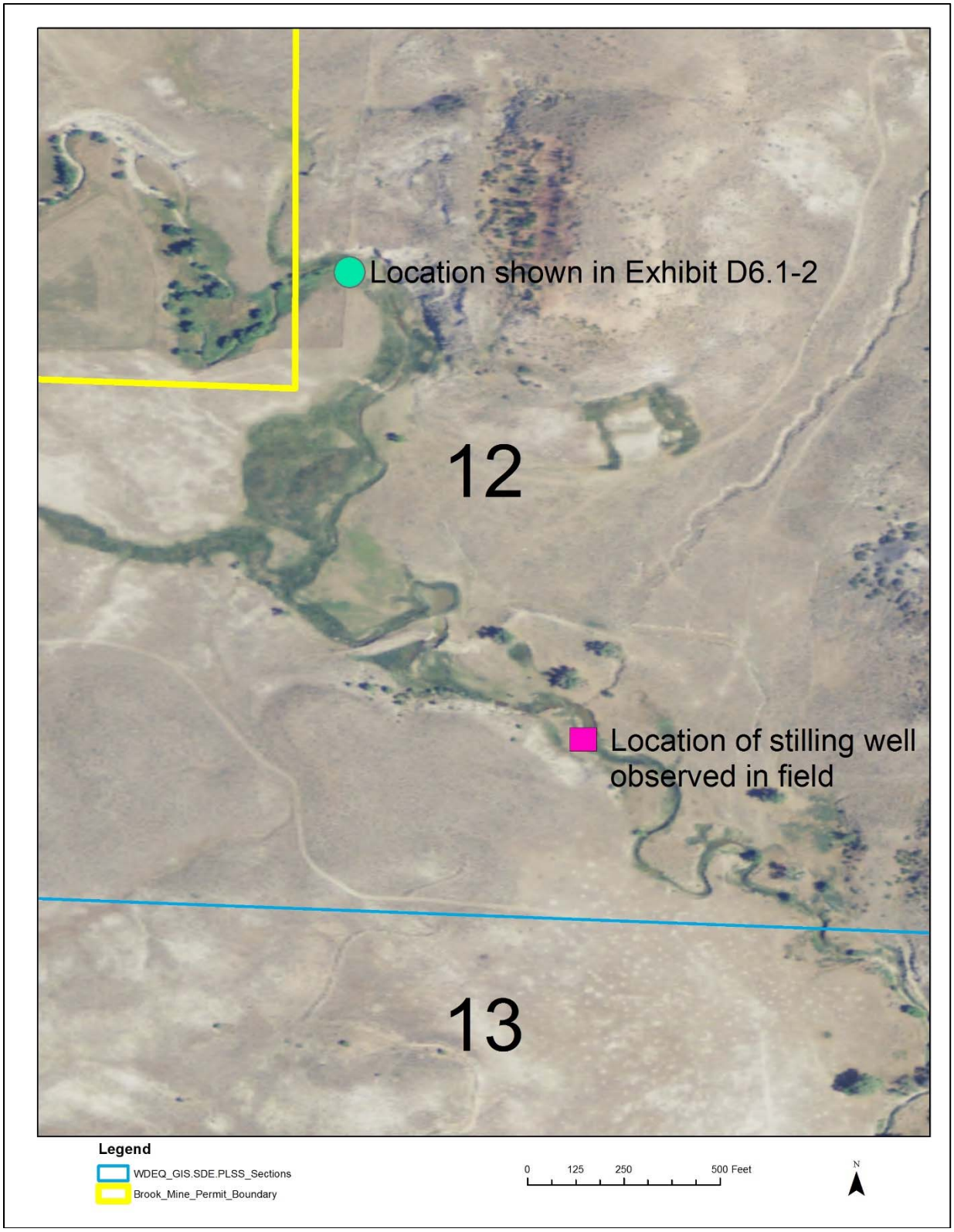
Comment MK 31. Response accepted. (MDK)

Section D6.1.5.1 Monitoring Stations

Comment MK 35. Response not accepted. Although the coordinates were included in Table D6.1-11 as requested, the location appears incorrect for the upstream monitoring station on Slater Creek (SM578512-SW-1). During the AVF reconnaissance site visit to Slater Creek on September 24, 2015, station SM578512-SW-1 was observed approximately 1,800 feet downstream from where it is currently shown in Exhibit D6.1-2. Please see the attached map and photo below. Please also note that the location observed in the field matches what is shown in Addendum D6-5 Figure D6-2. Please provide the correct coordinates and location for station SM578512-SW-1 in Table D6.1-11 and Exhibit D6.1-2. Please also update the coordinates in

Table MP.7-1 and the appropriate permit application Exhibits (Exhibit D6.1-2, Exhibit MP.7-1, Exhibit RP.8-5) to show the correct location of the station. (MDK)

Stilling well on right bank of Slater Creek, observed during September 23, 2015 site visit. Site was believed to be station SM578512-SW-1. Approximate location of this site is shown in the map below.



Map showing possible discrepancy in location of station SM578512-SW-1 on Slater Creek.

Section D6.1.5.2 Surface Water Quantity
Comment MK 39. Response accepted. (MDK)

Section D6.1.5.3 Surface Water Quality
Comment MK 41. Response accepted. (MDK)

Addendum D6-5 – Rating Curves
Comment MK 43. Response not accepted. The text was updated but it is unclear what is going to be directly measured. For example, the text states: *In addition, direct measurements of surveyed cross sections will be obtained when possible.* It is not clear if the measurement will be of the water discharge or the cross section dimensions. Please revise the sentence so it is clear that direct discharge measurements will be taken when possible to evaluate the rating curves. (MDK)

Appendix D11-AVF

Section D11.1 Introduction
Comment MK 1. Response accepted. (MDK)

Section D11.4.2 Extent of Subirrigation
Comment MK 9. Response accepted. (MDK)

Section D11.4.5 Agricultural Practices
Comment MK 12. Response accepted. (MDK)

Section D11.6 Extent of Alluvial Valley Floor
Comment MK 17. Response accepted. (MDK)

Section D11.7 Mining of Alluvial Valley Floor
Comment MK 21. Response not accepted. With respect to the three proposed alluvial monitoring wells, please state in the text in Section MP.25 that these wells will be installed prior to commencing any mining-related disturbance.

Comment MK 22. Response accepted. (MDK)

Comment MK 104. Response conditionally accepted. The permit application has not provided the information discussed in LQD Guideline No. 9, Part IV, Section C for determining the importance of farming to the AVFs that presumably will be declared by the LQD on the Tongue River and Goose Creek. However as per Guideline No. 9, this information is only required for "affected AVFs". The permit application implies that the AVFs on the Tongue River and Goose Creek should not be considered "affected AVFs" since farming would not be interrupted, discontinued, or precluded, and the essential hydrological functions of the AVFs would be preserved during mining. No mining is scheduled for these areas and the disturbance that is proposed appears to be minor enough such that essential hydrologic functions would not be affected. Therefore a significance to farming determination for these AVFs does not appear to be required. This may be subject to change pending other LQD staff input when the AVF determinations are made. (MDK)

Comment MK 105. Response accepted. (MDK)

Mine Plan

Section MP.6.1 Surface Water

Comment MK 57. Response accepted. (MDK)

Comment MK 61. Response accepted. (MDK)

Comment MK 63. Response accepted. (MDK)

Section MP.7.1 Surface Water Monitoring

Comment MK 66. Response accepted. (MDK)

Comment MK 68. Response accepted. (MDK)

Comment MK 71. Response accepted. (MDK)

Comment MK 106. Response not accepted. The location of the wastewater impoundment is not shown in Exhibit MP.5-1, as the map contains labels for only sedimentation ponds and flood control reservoirs. Exhibit 12 in Addendum MP-2 shows the design for a "typical facilities reservoir". The text in Section MP 5.2 should acknowledge that the location for the wastewater impoundment is not shown on Exhibit MP.5-1 and has not been determined yet, but the typical design is shown in Exhibit 12 in Addendum MP-2. Please make this correction or explain if my understanding of this issue is not accurate. (MDK)

Comment MK 107. Response accepted. (MDK)

Comment MK 108. Response accepted. (MDK)

Comment MK 109. Response accepted. (MDK)

Comment MK 110. Response accepted. (MDK)

Comment MK 111. Response accepted. (MDK)

Comment MK 112. Response accepted. (MDK)

Comment MK 113. Response accepted. (MDK)

Comment MK 114. Response accepted. (MDK)

Comment MK 115. Response accepted. (MDK)

Comment MK 116. Response not accepted. Thank you for providing the Class 1 and Class 2 Stream ½ mile buffer on Exhibit MP 5-1 and for showing other forms of sediment control

besides ASCMs in the buffer. However, the text should in this section should also state that the mine trenches will also serve as sediment control. This is important to demonstrate since there are some areas, for example in Section 18 near TR-6 and in Section 14 near TR-9A and TR-12 that are within the buffer to the Tongue River but sedimentation ponds will not be used. (MDK)

Comment MK 117. Response accepted. (MDK)

Reclamation Plan

Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors

Comment MK 24. Response not accepted. Please see review of the response to Comment MK 21 and state in the text in Section RP.10 that the three proposed wells will be installed prior to commencing any mining-related disturbance. (MDK)

Comment MK 25. Response accepted. (MDK)

Section RP.8.2 Permanent Impoundments

Comment MK 92. Response accepted. (MDK)

RP.3.4 Erosion and Sedimentation Control Practices

Comment MK 118. Response accepted. (MDK)

RP.8.5.2 Surface Water

Comment MK 119. Response accepted. (MDK)

Other Comments

Items Requested in Electronic Format for Preparation of CHIA

Comment MK 27. Response accepted. (MDK)

Comment MK 28. Response accepted. (MDK)

New Comments

Adjudication-Form 1

1. The index change sheet states that the affected area boundary was updated on several Exhibits. Has the affected area acreage changed? If so a new Form 1 will need submitted to show the correct affected area acreage. (MDK)

Appendix D-11 (AVF)

D11.5 Agricultural Practices

2. The CHIA site inspection report (Dated October 21, 2015 and mailed to Randall Atkins c/o WWC Engineering) discussed the abandoned Conable Reservoir and Ditch and Lateral system in Sections 12 and 13 within the proposed Brook Mine permit area. According to the SEO water rights database, a water right for Conable Reservoir was granted in 1901 (P223.0R). The purpose of the reservoir was to store water for irrigation of lands under the Conable Ditch and Lateral, which also held a water right to divert 1.46

cfs (P3088.0D). The water right allowed for using the water for irrigation of 100 acres of land adjacent to Slater Creek in T57N, R85W, Section 13. Both water rights were cancelled in 1906, and it is unknown the extent that the irrigation was ever developed. The dam for the reservoir has long since failed, allowing Slater Creek to flow freely through.

In Section D11.5, please incorporate the history of the Conable Reservoir and Ditch and Lateral System, as this demonstrates there was a historical attempt to irrigate lands in the Slater Creek valley within Section 13 of the proposed permit boundary. The attempt apparently failed and was abandoned and the water rights were cancelled. (MDK)

D11.7 Mining of the Alluvial Valley Floor

3. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this round. Please include a statement in the text of Section D11.7 that there is some minor disturbance proposed within the AVF extent. Please also see Comments 6 and 7 below that request this be addressed in the relevant sections of the Mine Plan and Reclamation Plan. (MDK)

Mine Plan

MP.1.3 Acreage to Be Affected Annually

4. There is a sentence in the second paragraph of this section that is confusing and needs rewritten to improve clarity. The difference between disturbance boundary and affected area boundary would likely be confusing to the public and therefore a clear distinction should be made. The sentence states: *The disturbance boundary includes all lands that will be physically disturbed during mining lands that are exclusive of the disturbance boundary but inclusive of the affected area boundary have the potential to be disturbed by mining*.

   It is suggested that this be broken into two sentences: *The disturbance boundary includes all lands that will be physically and directly disturbed during mining. The affected area boundary includes all lands within the disturbance boundary plus additional lands that have the potential to be disturbed by mining.*

MP.12.4 Buffer Zones

5. Assuming Slater Creek is an intermittent stream (Comment MK 29), LQD Coal Rules and Regulations, Chapter 4, Section 2 (r)(ii)(B) states that a buffer zone shall be designated, marked in the field, and on a mine plan map. From Chapter 4, Section 2 (r)(ii)(A), this buffer zone is to be 100 feet. Please designate the buffer zone on Exhibit MP-5.1 and provide a commitment to marking the buffer zone at select locations in the field prior to commencing mining-related disturbance. (MDK)

MP.25 Alluvial Valley Floors

6. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit

D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this round. Please include a statement in the text of Section MP.25 that there is some minor disturbance proposed within the AVF extent. Please also discuss in the text of MP.25 whether this disturbance would affect the essential hydrological functions of the AVF. (MDK)

Reclamation Plan

RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors

7. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this round. Please include a statement in the text of Section RP.10 that there is some minor disturbance proposed within the AVF extent. Please also discuss in the text of Section RP.10 whether this disturbance would affect the essential hydrological functions of the AVF. (MDK)

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Brook Mine Permit Application, TFN 6 2/025, Round 2 responses and Round 3 comments
Date: Tuesday, November 03, 2015 8:19:44 AM
Attachments: image001.jpg

Thanks Matt. I appreciate your timely review.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Tuesday, November 03, 2015 8:17 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: Brook Mine Permit Application, TFN 6 2/025, Round 2 responses and Round 3 comments

Bj,

I've attached my review. Many comments were addressed but there are still some remaining and a few new ones that arose based on this round. I asked them to revise the description of Slater Creek as an ephemeral stream. They also updated the affected area boundary in several exhibits but did not state if the affected area acreage increased, so I have a comment on needing to update Form 1 if this is the case. If there is anything in my review you want to talk about before sending, please let me know.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Mon, Oct 19, 2015 at 2:43 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Associates,
>
> The RAMACO Coal Mine Permit Application Round 2 Comment Responses was received in the LQD District III Office on Friday, October 19, 2015. Please review your Round 2 Comments with their responses and send me any new comments no later than Friday, November 6, 2015. The Round 3 comments must be postmarked by Sunday, November 15, 2015. Obviously, the material must be ready by no later than Friday, November 13th but, with Veterans Day and weekends, the reviews need to be completed ASAP.
>
> I am reprinting the original review assignments to assist you in examining those portions of the original document you have been working with.

VOLUME	SECTION	DESCRIPTION	ASSIGNED STAFF
Volume I and II		Adjudication	Bj Kristiansen
Volume III	Appendix D1	Land Use	Dave Myers, Dave Schellinger
	Appendix D2	History	Bj
	Appendix D3	Archeological Resources	N/A
	Appendix D4	Climatology	Dave Myers
Volume IV	Appendix D5	Topography	Dave Myers

		Geology Overburden Assessment	Bj, Kim Medina Dave Schillinger
Volume V	Appendix D6	Hydrology-surface Hydrology-groundwater **CHIA**	Dave Myers, Matt Kunze Muthu Kuchanur, Bj, Kim Medina Matt Kunze, Muthu Kuchanur
Volume VI	Appendix D7	Soil Resources Assessment	Dave Schellinger
Volume VII	Appendix D8	Vegetation	Stacey Page, Jamie Jakes
Volume VIII	Appendix D9	Wildlife	Finished
Volume IX	Appendix D10	Wetlands	Finished
Volume X	Appendix D11	AVF	Dave Myers, Myself
Volume XI	Appendix D11	Mine Plan	Staff
Volume XII	Appendix D12	Reclamation Plan	Doug Emme - Reclamation Bond Staff

Please contact me if there is a problem with the review and we can work out alternative schedules, if necessary. The documents are in the library at this moment. I am also going to receive an electronic copy of all the permit components, including narrative and maps, and I will make that available on the server for those who prefer to examine the document electronically.

Let me know if this email is appropriately formatted. The Gmail viewer in Internet Explorer and Chrome may not work with the table inserted above. You will be getting a paper copy of the assignments within the next 2 days so that should help with clarity.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	BJ Kristiansen
Subject:	Re: Brook Mine Permit Application, TFN 6 2/025, Round 2 responses and Round 3 comments
Date:	Wednesday, November 04, 2015 2:49:54 PM
Attachments:	MDK_Third Round Review on Brook Mine New Permit Application_TFN 6 2-025_REVISED 4Nov2015.docx image001.jpg

---

Bj,

Please find my revised review and discard the one I sent yesterday (I will also mail up a hard copy). I added a new comment (Comment #5). Muthu brought to my attention that during this round, Section MP.8 was changed and a new Table (MP.8-1) was added. Groundwater wells were removed as a water supply source and surface water rights are now proposed to provide the majority of the water. However there is no detail on where these water rights are coming from and the PHC has not been updated to reflect this change.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Tue, Nov 3, 2015 at 8:21 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Thanks Matt. I appreciate your timely review.
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Tuesday, November 03, 2015 8:17 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** Re: Brook Mine Permit Application, TFN 6 2/025, Round 2 responses and Round 3 comments
>
> Bj,
>
> I've attached my review. Many comments were addressed but there are still some remaining and a few new ones that arose based on this round. I asked them to revise the description of Slater Creek as an ephemeral stream. They also updated the affected area boundary in several exhibits but did not state if the affected area acreage increased, so I have a comment on needing to update Form 1 if this is the case. If there is anything in my review you want to talk about before sending, please let me know.
>
> Matt
>
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
>

Wyoming Department of Environmental Quality, Land Quality Division

200 West 17th Street, Lower Level

Cheyenne, WY 82002

307-777-7055

On Mon, Oct 19, 2015 at 2:43 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

Associates,

The RAMACO Coal Mine Permit Application Round 2 Comment Responses was received in the LQD District III Office on Friday, October 19, 2015. Please review your Round 2 Comments with their responses and send me any new comments no later than Friday, November 6, 2015. The Round 3 comments must be postmarked by Sunday, November 15, 2015. Obviously, the material must be ready by no later than Friday, November 13th but, with Veterans Day and weekends, the reviews need to be completed ASAP.

I am reprinting the original review assignments to assist you in examining those portions of the original document you have been working with.

VOLUME	SECTION	DESCRIPTION	ASSIGNED STAFF
Volume I and II		Adjudication	Bj Kristiansen
Volume III	Appendix D1	Land Use	Dave Myers, Dave Schellinger
	Appendix D2	History	Bj
	Appendix D3	Archeological Resources	N/A
	Appendix D4	Climatology	Dave Myers
Volume IV	Appendix D5	Topography	Dave Myers
		Geology	Bj, Kim Medina
		Overburden Assessment	Dave Schillinger
Volume V	Appendix D6	Hydrology-surface	Dave Myers, Matt Kunze
		Hydrology-groundwater	Muthu Kuchanur, Bj, Kim Medina
		CHIA	Matt Kunze, Muthu Kuchanur
Volume VI	Appendix D7	Soil Resources Assessment	Dave Schellinger
Volume VII	Appendix D8	Vegetation	Stacey Page, Jamie Jakes
Volume VIII	Appendix D9	Wildlife	Finished
Volume IX	Appendix D10	Wetlands	Finished
Volume X	Appendix D11	AVF	Dave Myers, Myself

Volume XI	Appendix D11	Mine Plan	Staff
Volume XII	Appendix D12	Reclamation Plan	Doug Emme - Reclamation Bond Staff

Please contact me if there is a problem with the review and we can work out alternative schedules, if necessary. The documents are in the library at this moment. I am also going to receive an electronic copy of all the permit components, including narrative and maps, and I will make that available on the server for those who prefer to examine the document electronically.

Let me know if this email is appropriately formatted. The Gmail viewer in Internet Explorer and Chrome may not work with the table inserted above. You will be getting a paper copy of the assignments within the next 2 days so that should help with clarity.

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Matt Kunze, LQD Division Services

DATE: November 4, 2015 **(REVISED)**

SUBJECT: Third Round Comments on Brook Mine Permit Application (TFN 6 2/025)

Responses to second round comments on the Brook Mine permit application (TFN 6 2/025) were received by the Cheyenne LQD on October 23, 2015. The following is a review of the responses to my second round comments on the application.

Appendix D6-Hydrology

Section D6.1.2 Drainage Basin Description

Comment MK 29. Response not accepted. The additional discussion on the hydrology of Slater Creek was included as requested. However, based on observations from the AVF reconnaissance site visit to Slater Creek on September 24, 2015, Slater Creek should not be characterized as an ephemeral stream. At the time of the site visit, standing water and a small amount of flow was observed in the channel, particularly in Section 12. This flow was observed during a dry period when no precipitation had occurred previously. Therefore the flow was due to some other source besides direct response to precipitation. The permit application indicates that some discharge to Slater Creek occurs from infiltration of precipitation into high perched scoria burn above the stream channel; this water is stored and slowly released to Slater Creek. It appears that this flow may form a shallow water table that provides baseflow to the channel.

In my opinion Slater Creek is better described as an intermittent stream with a few isolated reaches that may be perennial. Please revise any text in the permit application that describes Slater Creek as an ephemeral stream (Page D6-2-Section D6.1.2, Page D6-11-Section D6.1.5.2, Page D6-11-Section D6.1.5.3, Page RP-45-Section RP.8.5.2). (MDK)

Section D6.1.3.2 Flood Studies

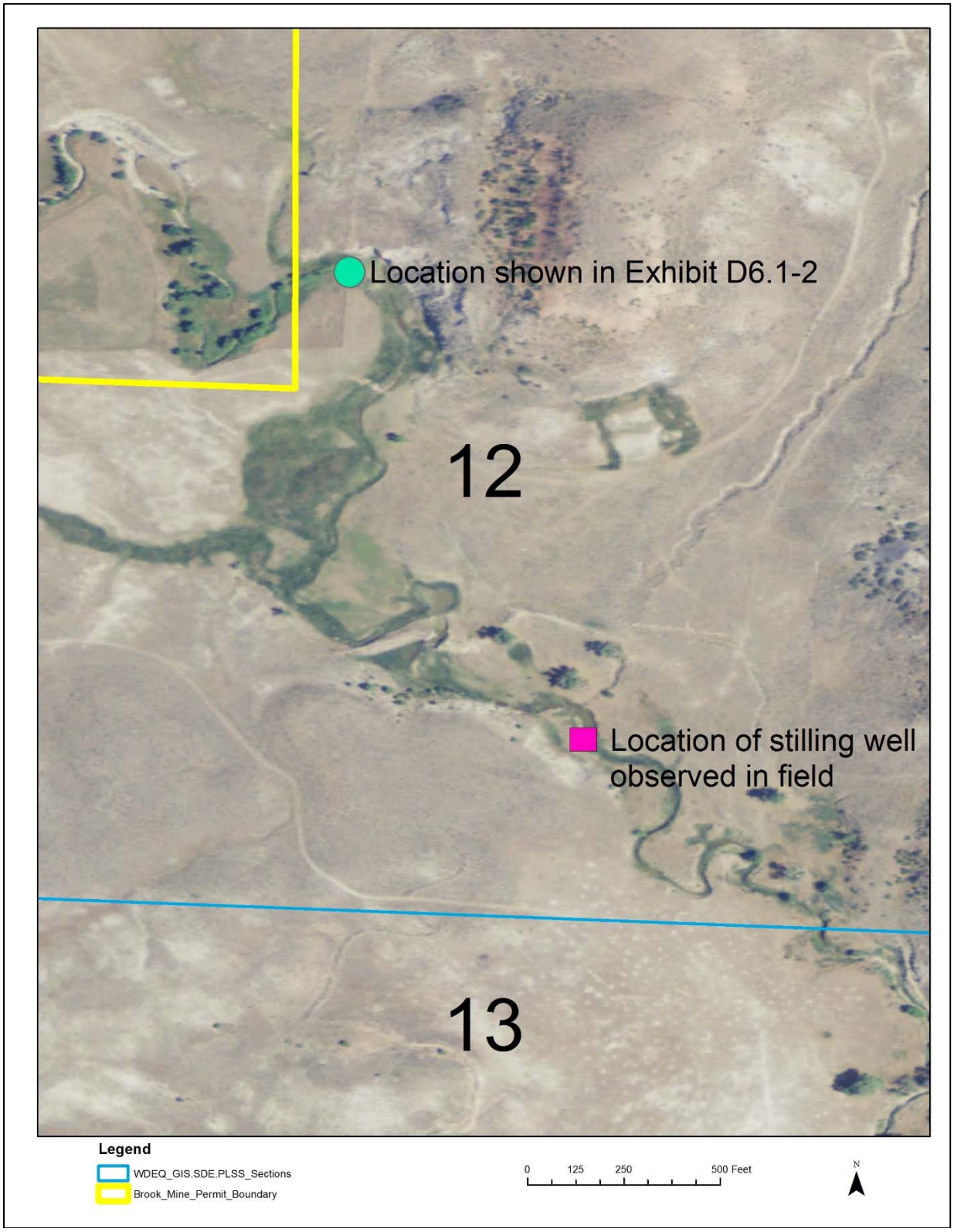
Comment MK 31. Response accepted. (MDK)

Section D6.1.5.1 Monitoring Stations

Comment MK 35. Response not accepted. Although the coordinates were included in Table D6.1-11 as requested, the location appears incorrect for the upstream monitoring station on Slater Creek (SM578512-SW-1). During the AVF reconnaissance site visit to Slater Creek on September 24, 2015, station SM578512-SW-1 was observed approximately 1,800 feet downstream from where it is currently shown in Exhibit D6.1-2. Please see the attached map and photo below. Please also note that the location observed in the field matches what is shown in Addendum D6-5 Figure D6-2. Please provide the correct coordinates and location for station SM578512-SW-1 in Table D6.1-11 and Exhibit D6.1-2. Please also update the coordinates in

Table MP.7-1 and the appropriate permit application Exhibits (Exhibit D6.1-2, Exhibit MP.7-1, Exhibit RP.8-5) to show the correct location of the station. (MDK)

Stilling well on right bank of Slater Creek, observed during September 23, 2015 site visit. Site was believed to be station SM578512-SW-1. Approximate location of this site is shown in the map below.



Map showing possible discrepancy in location of station SM578512-SW-1 on Slater Creek.

Section D6.1.5.2 Surface Water Quantity
Comment MK 39. Response accepted. (MDK)

Section D6.1.5.3 Surface Water Quality
Comment MK 41. Response accepted. (MDK)

Addendum D6-5 – Rating Curves
Comment MK 43. Response not accepted. The text was updated but it is unclear what is going to be directly measured. For example, the text states: *In addition, direct measurements of surveyed cross sections will be obtained when possible.* It is not clear if the measurement will be of the water discharge or the cross section dimensions. Please revise the sentence so it is clear that direct discharge measurements will be taken when possible to evaluate the rating curves. (MDK)

Appendix D11-AVF

Section D11.1 Introduction
Comment MK 1. Response accepted. (MDK)

Section D11.4.2 Extent of Subirrigation
Comment MK 9. Response accepted. (MDK)

Section D11.4.5 Agricultural Practices
Comment MK 12. Response accepted. (MDK)

Section D11.6 Extent of Alluvial Valley Floor
Comment MK 17. Response accepted. (MDK)

Section D11.7 Mining of Alluvial Valley Floor
Comment MK 21. Response not accepted. With respect to the three proposed alluvial monitoring wells, please state in the text in Section MP.25 that these wells will be installed prior to commencing any mining-related disturbance.

Comment MK 22. Response accepted. (MDK)

Comment MK 104. Response conditionally accepted. The permit application has not provided the information discussed in LQD Guideline No. 9, Part IV, Section C for determining the importance of farming to the AVFs that presumably will be declared by the LQD on the Tongue River and Goose Creek. However as per Guideline No. 9, this information is only required for "affected AVFs". The permit application implies that the AVFs on the Tongue River and Goose Creek should not be considered "affected AVFs" since farming would not be interrupted, discontinued, or precluded, and the essential hydrological functions of the AVFs would be preserved during mining. No mining is scheduled for these areas and the disturbance that is proposed appears to be minor enough such that essential hydrologic functions would not be affected. Therefore a significance to farming determination for these AVFs does not appear to be required. This may be subject to change pending other LQD staff input when the AVF determinations are made. (MDK)

Comment MK 105. Response accepted. (MDK)

Mine Plan

Section MP.6.1 Surface Water

Comment MK 57. Response accepted. (MDK)

Comment MK 61. Response accepted. (MDK)

Comment MK 63. Response accepted. (MDK)

Section MP.7.1 Surface Water Monitoring

Comment MK 66. Response accepted. (MDK)

Comment MK 68. Response accepted. (MDK)

Comment MK 71. Response accepted. (MDK)

Comment MK 106. Response not accepted. The location of the wastewater impoundment is not shown in Exhibit MP.5-1, as the map contains labels for only sedimentation ponds and flood control reservoirs. Exhibit 12 in Addendum MP-2 shows the design for a "typical facilities reservoir". The text in Section MP 5.2 should acknowledge that the location for the wastewater impoundment is not shown on Exhibit MP.5-1 and has not been determined yet, but the typical design is shown in Exhibit 12 in Addendum MP-2. Please make this correction or explain if my understanding of this issue is not accurate. (MDK)

Comment MK 107. Response accepted. (MDK)

Comment MK 108. Response accepted. (MDK)

Comment MK 109. Response accepted. (MDK)

Comment MK 110. Response accepted. (MDK)

Comment MK 111. Response accepted. (MDK)

Comment MK 112. Response accepted. (MDK)

Comment MK 113. Response accepted. (MDK)

Comment MK 114. Response accepted. (MDK)

Comment MK 115. Response accepted. (MDK)

Comment MK 116. Response not accepted. Thank you for providing the Class 1 and Class 2 Stream ½ mile buffer on Exhibit MP 5-1 and for showing other forms of sediment control

besides ASCMs in the buffer. However, the text should in this section should also state that the mine trenches will also serve as sediment control. This is important to demonstrate since there are some areas, for example in Section 18 near TR-6 and in Section 14 near TR-9A and TR-12 that are within the buffer to the Tongue River but sedimentation ponds will not be used. (MDK)

Comment MK 117. Response accepted. (MDK)

Reclamation Plan

Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors

Comment MK 24. Response not accepted. Please see review of the response to Comment MK 21 and state in the text in Section RP.10 that the three proposed wells will be installed prior to commencing any mining-related disturbance. (MDK)

Comment MK 25. Response accepted. (MDK)

Section RP.8.2 Permanent Impoundments

Comment MK 92. Response accepted. (MDK)

RP.3.4 Erosion and Sedimentation Control Practices

Comment MK 118. Response accepted. (MDK)

RP.8.5.2 Surface Water

Comment MK 119. Response accepted. (MDK)

Other Comments

Items Requested in Electronic Format for Preparation of CHIA

Comment MK 27. Response accepted. (MDK)

Comment MK 28. Response accepted. (MDK)

New Comments

Adjudication-Form 1

1. The index change sheet states that the affected area boundary was updated on several Exhibits. Has the affected area acreage changed? If so a new Form 1 will need submitted to show the correct affected area acreage. (MDK)

Appendix D-11 (AVF)

D11.5 Agricultural Practices

2. The CHIA site inspection report (Dated October 21, 2015 and mailed to Randall Atkins c/o WWC Engineering) discussed the abandoned Conable Reservoir and Ditch and Lateral system in Sections 12 and 13 within the proposed Brook Mine permit area. According to the SEO water rights database, a water right for Conable Reservoir was granted in 1901 (P223.0R). The purpose of the reservoir was to store water for irrigation of lands under the Conable Ditch and Lateral, which also held a water right to divert 1.46

cfs (P3088.0D). The water right allowed for using the water for irrigation of 100 acres of land adjacent to Slater Creek in T57N, R85W, Section 13. Both water rights were cancelled in 1906, and it is unknown the extent that the irrigation was ever developed. The dam for the reservoir has long since failed, allowing Slater Creek to flow freely through.

In Section D11.5, please incorporate the history of the Conable Reservoir and Ditch and Lateral System, as this demonstrates there was a historical attempt to irrigate lands in the Slater Creek valley within Section 13 of the proposed permit boundary. The attempt apparently failed and was abandoned and the water rights were cancelled. (MDK)

D11.7 Mining of the Alluvial Valley Floor

3. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this round. Please include a statement in the text of Section D11.7 that there is some minor disturbance proposed within the AVF extent. Please also see Comments 7 and 8 below that request this be addressed in the relevant sections of the Mine Plan and Reclamation Plan. (MDK)

Mine Plan

MP.1.3 Acreage to Be Affected Annually

4. There is a sentence in the second paragraph of this section that is confusing and needs rewritten to improve clarity. The difference between disturbance boundary and affected area boundary would likely be confusing to the public and therefore a clear distinction should be made. The sentence states: *The disturbance boundary includes all lands that will be physically disturbed during mining lands that are exclusive of the disturbance boundary but inclusive of the affected area boundary have the potential to be disturbed by mining*.

   It is suggested that this be broken into two sentences: *The disturbance boundary includes all lands that will be physically and directly disturbed during mining. The affected area boundary includes all lands within the disturbance boundary plus additional lands that have the potential to be disturbed by mining.*

MP.8 Water Use

5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-1, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

MP.12.4 Buffer Zones

6. Assuming Slater Creek is an intermittent stream (Comment MK 29), LQD Coal Rules and Regulations, Chapter 4, Section 2 (r)(ii)(B) states that a buffer zone shall be designated, marked in the field, and on a mine plan map. From Chapter 4, Section 2 (r)(ii)(A), this buffer zone is to be 100 feet. Please designate the buffer zone on Exhibit MP-5.1 and provide a commitment to marking the buffer zone at select locations in the field prior to commencing mining-related disturbance. (MDK)

MP.25 Alluvial Valley Floors

7. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this round. Please include a statement in the text of Section MP.25 that there is some minor disturbance proposed within the AVF extent. Please also discuss in the text of MP.25 whether this disturbance would affect the essential hydrological functions of the AVF. (MDK)

Reclamation Plan

RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors

8. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this round. Please include a statement in the text of Section RP.10 that there is some minor disturbance proposed within the AVF extent. Please also discuss in the text of Section RP.10 whether this disturbance would affect the essential hydrological functions of the AVF. (MDK)

From:	Thomas Sansonetti
To:	andrew kuhlmann
Cc:	Isaac Sutphin
Subject:	Promised Memo
Date:	Thursday, November 05, 2015 11:58:21 AM
Attachments:	Memorandum to Andrew Kuhlmann, Sr. Asst Atty Gen, re. Brook Mining Company Mine Permit Application.pdf image001.gif

---

Hi Andrew!

Please find attached the legal memorandum dealing with the Padlock Ranch consent question I promised to send you following our last meeting in your office. I am having the original signed copy hand delivered to your office today.

Feel free to contact either me or Isaac Sutphin should you have any follow up questions. Tom

HOLLAND&HART LLP
THE LAW OUT WEST

MEMORANDUM

November 5, 2015

TO: Andrew Kuhlmann
Wyoming Attorney General's Office
Senior Assistant Attorney General
2424 Pioneer Avenue
Cheyenne, WY 82002

FROM: Thomas Sansonetti Tom Sansonetti

RE: Brook Mining Company Mine Permit Application
Wyo. Stat. § 35-11-406
Padlock Ranch Consent

Mr. Kuhlmann:

As part of your analysis and consideration of Brook Mining Company, LLC's Mine Permit Application (WDEQ No. TFN 6 2/025), you have raised a series of questions seeking information about the relative rights of a surface owner known as Padlock Ranch. In addition to my recent correspondence (October 13, 2015) in which I responded to several specific questions, you have asked this firm to provide a summary of the law establishing why Padlock Ranch does not have the authority to insist on surface owner consent to the mine project prior to issuance of the permit under Wyo. Stat. § 35-11-406(b). This memorandum summarizes the factual and legal framework governing the relationship between Padlock Ranch and Brook Mining Company[1] and explains why additional consent from Padlock Ranch is not required.

BASIC FACTUAL BACKGROUND

You have asked for an analysis of the respective property rights affected by Brook Mining Company's permit application. Although the scope of Brook's property rights extends to

[1] Brook Mining Company has leased for coal mining certain mineral lands and correlative surface rights located in Sheridan County, Wyoming. These rights are owned by Ramaco Wyoming Coal, LLC.

several other parcels, this analysis is limited to a discussion of Brook's rights as they relate to Padlock Ranch. Padlock Ranch traces its limited surface rights in the affected parcels to a grant from Sheridan-Wyoming Coal Company (SWC). In 1954, the surface and mineral interests in the subject property in Sheridan County were collectively owned by SWC. At that time, SWC chose to convey certain portions of its surface property, including certain parcels subsequently acquired by Padlock Ranch, to Big Horn Coal Company. When SWC issued its 1954 Deed, it clearly and unambiguously defined its mineral interests, interests which it unequivocally reserved for itself in the 1954 Deed. Likewise, SWC reserved to itself certain surface rights "necessary or convenient" to allow the development of the reserved minerals. The operative language of the 1954 Deed states:

> The Grantor reserving unto itself, its successors and assigns all gas, oil, coal and other minerals contained in all of the above described lands, together with the right to **mine, explore, drill, extract and remove the same**, and **including the right to use as much of the surface of said lands as may be necessary or convenient in order to enable** the Grantor, its successors and assigns to mine, explore, drill, extract and remove said oil, gas, coal and other minerals. And in the event that the Grantor, its successors or assigns, shall hereafter mine, drill, explore, extract and remove gas, oil, coal or other minerals **and shall utilize any part of the surface of said lands** in connection therewith, they shall be free from any liability or claim for damage to the surface of said lands that might be asserted by the Grantee, its successors and assigns, on account of subsidence **or other injury to the surface of said lands resulting from such operations**, except that in case of any such injury Grantor will pay such actual damage as the parties shall agree has been caused to any said lands, or in default of such agreement, as shall be determined by arbitration to have been so caused; provided, however, that in no event shall Grantor, its successors or assigns, be obliged to pay for such damage more than Ten Dollars ($10.00) per acre for any of said lands damaged which are dry grazing lands, Fifty Dollars ($50.00) per acre for any said lands damaged which are bottom lands, and Two Hundred Dollars ($200.00) per acre for any of said lands which are irrigated lands.

Cite 1954 Deed (Emphasis added.)

Through a series of transactions over the past sixty years, SWC's reserved rights were acquired by Ramaco Wyoming Coal, LLC and subsequently leased to Brook Mining Company. For a detailed summary of these transactions, please refer to Brook's Mine Permit Application.

QUESTION & ANALYSIS

Through our recent correspondence and face-to-face meetings, you have raised questions about whether Padlock Ranch qualifies as a resident or agricultural surface owner such that its consent is necessary prior to issuance of a mine permit. Although the Wyoming Environmental Quality Act does provide for specific landowner consent in certain circumstances, the requirement has been narrowly construed by the Wyoming Supreme Court and does not apply to the specific facts here. The surface owner consent requirement is set forth by statute at Wyo. Stat. § 35-11-406(b). This statute contemplates some form of consent if the surface owner is a qualified "resident or agricultural landowner" as that term is defined in the Act.

Although Wyo. Stat. § 35-11-406(b) includes language requiring some form of consent from affected surface owners (either resident surface owners or qualified agricultural surface owners), the requirement has been applied carefully by the Wyoming Supreme Court. Indeed, the Court has unequivocally held that consent from a qualified surface owner is only required if that surface owner holds the legal right to exclude the permit applicant from the surface. *See WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986).

Here, Padlock Ranch does not possess the legal right to exclude Brook Mining Company from developing the mineral estate and, thus, cannot withhold consent to the mine permit. Indeed, pursuant to the unambiguous terms of the 1954 Deed, Padlock Ranch's predecessor in interest acknowledged the right to access and use of the Padlock surface as "necessary or convenient" for the extraction of coal.

The Wyoming Supreme Court has concluded that DEQ statutes do not supersede or interfere with appropriate legal authority to mine. *WYMO Fuels,* 723 P.2d at 1233. In *WYMO*, the surface owners of adjacent parcels refused statutory consent to the mining plan pursuant to Wyo. Stat. § 35-11-406(b) because a haul road and railroad spur track would cross their land. *Id.* at 1233. After DEQ rejected WYMO Fuel's mining permit application for lack of landowner consent, WYMO Fuels obtained the requisite access rights via a condemnation proceeding. *Id.* at 1234. At a hearing on WYMO Fuel's mining permit application, the EQC recognized WYMO obtained the surface rights it required, so it no longer insisted on surface owner consent. *Id.* at 1234–1235.

The Wyoming Supreme Court affirmed the EQC's reasoning, noting that surface owner rights under DEQ statutes become irrelevant when "inconsistent" with the legal authority granting the mineral estate owner's right to mine. *See id.* at 1236. The Court found that the condemnation proceeding appropriately compensated the surface owners for any damage they would suffer from WYMO Fuel's use. *Id.* at 1237. The "net effect" is the surface owners "had no interest left which required the protection of the Wyoming Environmental Quality Act, and, therefore, they should not be afforded the rights of surface owners under that statute." *Id.*

In this case, the same logic would defeat any attempt to prevent issuance of the mine permit by any surface owner subject to the 1954 Deed, including Padlock Ranch. Section 35-11-406 has no text that applies it to the contract between the parties or has it supersede the parties' specific ownership interests and rights under the 1954 Deed. As *WYMO* explained, Padlock Ranch has no interest that requires the protection of the Environmental Quality Act. In fact, DEQ presumes a deed or contract conferring "legal authority to extract coal by surface mining

methods" resolves any damage payment issues that are not addressed in DEQ's statutes. *See* Wyo. Stat. § 35-11-406(b)(xii).

Even if the 1954 Deed did not provide for damages, the Environmental Quality Act's reclamation and bonding requirements adequately compensate Padlock Ranch for potential surface damage. To complete the mining permit application, the mineral estate owner must plan for proposed future surface use, appropriate grading for the proposed use, vegetation and other surface treatment, "disposal of buildings and structures erected during the operation," and estimate the reclamation plan's total cost. *See* Wyo. Stat. § 35-11-406(b)(ii)–(vi). The reclamation plan also proposes methods for appropriately treating the topsoil and ensuring the affected area does not become polluted or unduly disturbed by "ongoing operations." *See* Wyo. Stat. § 35-11-406(b)(viii)–(ix), (xiii)–(xviii). The reclamation plan ultimately protects the surface owner's interests.

Additionally, the mineral estate owner must post a bond to insure adequate compensation to the surface owner for any damage he or she may suffer. The bond secures payment "for any damages to the surface state, to the crops and forage, or to the tangible improvements of the surface owner." *See* Wyo. Stat. § 35-11-416(a). The mineral estate owner pays these damages to the surface owner "annually" unless the parties otherwise agree. *See id.* Together Brook's statutory reclamation plan and bonding will compensate Padlock Ranch for any damage it suffers above and beyond the compensation for damage under the 1954 Deed's terms.

Regardless, these additional protections do not change the key, operative facts; Padlock Ranch's consent to the mine plan is not necessary for issuance of the mine permit since Brook has superior rights to use the surface. Padlock Ranch acquired its limited surface rights subject to Brook's superior right to develop the mineral estate by using the surface as "necessary or

convenient." These overarching rights strip Padlock Ranch of any basis to insist upon consent. Even if one were to accept a position contrary to the Wyoming Supreme Court's findings in *WYMO Fuels*, Padlock Ranch's predecessor in interest effectively granted its consent to all surface use that is "necessary or convenient." Thus, the consent contemplated by Wyo. Stat. § 35-11-406 is implicit in the reservations of the 1954 Deed.

8193933_2

From:	Muthu Kuchanur
To:	BJ Kristiansen
Subject:	Third Round Comments on Brook Mine New Permit Application (TFN 6 2/025)
Date:	Friday, November 06, 2015 8:22:00 AM
Attachments:	MuthuKuchanur_Third Round Comments_ Brook Mine _TFN 6 2-025.docx

---

Good morning,

Please find attached my third round review comments. The outstanding four comments are: 7,15,32 and 74. As we discussed, I am not able to replicate the results from the groundwater model files for the transient simulation (mine plan and recovery). Please feel free to let me know if you need my assistance in discussing this with WWC. I believe a phone call walk-through of the instructions after we get the model files from WWC would expedite the process.

Have a good weekend!

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82001

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Muthu Kuchanur, LQD Division Services

DATE: November 6, 2015

SUBJECT: Third Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

As requested by your October 9, 2015 memorandum, I have performed a review of the responses to my second round comments.

Appendix D5

Section D5.3.3.2 Overburden and Interburden

1. Response accepted. (MK, Round 3)

Section D5.3.3.3 Coal

2. Response accepted. (MK, Round 3)

Section D5.3.3.3 Coal

3. Response accepted. (MK, Round 3)

4. Response accepted. (MK, Round 2)

Section D5.3 Geology of Mine Area

5. Response accepted. (MK, Round 3)

Addendum D5-3 Geologic Cross Sections

6. Response accepted. (MK, Round 3)

Addendum D5-4 Isopachs

7. Response not accepted. The Table of Contents for Addendum D5-4 indicates that there is an “Exhibit 1: Overburden Isopach Overlying the Carney Coal Seam”. This Exhibit is not present in the Cheyenne Office copy of the Round 2 response submittal. (MK)

Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table

8. Response accepted. (MK, Round 2)

Appendix D6

Section D6.2.1 Regional Hydrogeology

9. Response accepted. (MK, Round 2)

10. Response accepted. (MK, Round 2)

11. Response accepted. (MK, Round 2)

12. Response accepted. (MK, Round 2)

Section D6.2.2.1 Monitor Well Construction, Completion and Development

13. Response accepted. (MK, Round 2)

14. Response accepted. (MK, Round 2)

Section D6.2.2.2 Aquifer Tests

15. Response not accepted. It is acknowledged that there is a potentiometric head difference between alluvium and Carney coal seam. Please clarify if this potentiometric head difference is an artifact caused by CBM dewatering. (MK)

16. Response accepted. (MK, Round 3)

17. Response accepted. (MK, Round 2)

18. Response accepted. (MK, Round 3)

19. Response accepted. (MK, Round 3)

20. Response accepted. (MK, Round 3)

Section D6.2.2.4 Premining Potentiometric Surface

21. Response accepted. (MK, Round 3)

22. Response accepted. (MK, Round 2)

Section D6.2.2.5 Recharge and Discharge Areas

23. Response accepted. (MK, Round 2)

24. Response accepted. (MK, Round 2)

25. Response accepted. (MK, Round 3)

26. Response accepted. (MK, Round 2)

Section D6.2.3 Baseline Water Quality

27. Response accepted. (MK, Round 2)

28. Response accepted. (MK, Round 2)

Section D6.2.4 Groundwater Rights

29. Response accepted. (MK, Round 3)

30. Response accepted. (MK, Round 3)

31. Response accepted. (MK, Round 3)

<u>Mine Plan</u>

32. Response not accepted. The LQD was able to obtain a newer version of Groundwater Vistas from the OSM. The model files provided in the initial submittal were attempted to run following the written instructions that came along with the model files. The steady state model ran and the results for mass balance were similar to the results provided in the application. However, the transient model results do not align with the results presented in the application. Please provide additional assistance and clarification to help the LQD replicate the model results. Depending on the results from this verification run, additional comments may be generated. In addition, please review comment# 74 on the revised model files. (MK, Round 3)

MP.1.1 Type of Mine

33. Response accepted. (MK, Round 2)

34. Response accepted. (MK, Round 2)

MP.5.8 Mine Pit Dewatering Plan

35. Response accepted. (MK, Round 3)

36. Response accepted. (MK, Round 3)

MP.5.9 Dewatering Wells

37. Response accepted. (MK, Round 3)

38. Response accepted. (MK, Round 2)

MP.5.8 Groundwater Rights

39. Response accepted. (MK, Round 2)

MP.6.2.Groundwater

40. Response accepted. (MK, Round 3)

41. Response accepted. (MK, Round 2)

42. Response accepted. (MK, Round 2)

MP.6.3.2 Plan to Mitigate the Impacts on Groundwater

43. Response accepted (MK)

MP.7.2 Groundwater Monitoring

44. Response accepted. (MK, Round 3)

45. Response accepted. (MK, Round 2)

MP.8 Water use

46. Response accepted. (MK, Round 3)

47. Response accepted. (MK, Round 3)

48. Response accepted. (MK, Round 3)

49. Response accepted. (MK, Round 3)

Addendum MP-3 Groundwater Model

50. Response accepted. (MK, Round 3)

51. Response accepted. (MK, Round 3)

52. Response accepted. (MK, Round 3)

53. Response accepted. (MK, Round 2)

54. Response accepted. (MK, Round 2)

55. R Response accepted. (MK, Round 3)

56. Response accepted. (MK, Round 3)

57. Response accepted. (MK, Round 2)

58. Response accepted. (MK, Round 3)

59. Response accepted. (MK, Round 2)

60. Response accepted. (MK, Round 2)

61. Response accepted. (MK, Round 3)

62. Response accepted. (MK, Round 3)

63. Response accepted. (MK, Round 2)

64. Response accepted. (MK, Round 3)

65. Response accepted. (MK, Round 3)

66. Response accepted. (MK, Round 3)

67. Response accepted. (MK, Round 2)

68. Response accepted. (MK, Round 3)

69. Response accepted. (MK, Round 3)

70. Response accepted. (MK, Round 3)

71. Response accepted. (MK, Round 2)

72. Response accepted. (MK, Round 2)

73. Response accepted. (MK, Round 3)

74. Response not accepted. Please provide the revised model files for the LQD review and records. (MK, Round 3)

75. Response accepted. (MK, Round 2)

76. Response accepted. (MK, Round 2)

77. Response accepted. (MK, Round 3)

78. Response accepted. (MK, Round 2)

79. Response accepted. (MK, Round 3)

80. Response accepted. (MK, Round 3)

81. Response accepted. (MK, Round 3)

82. Response accepted. (MK, Round 2)

83. Response accepted. (MK, Round 3)

84. Response accepted. (MK, Round 3)

85. Response accepted. (MK, Round 3)

86. Response accepted. (MK, Round 3)

87. Response accepted. (MK, Round 2)

88. Response accepted. (MK, Round 3)

89. Response accepted. (MK, Round 3)

Addendum MP-6 Subsidence Control Plan

90. Response accepted. (MK, Round 2)

<u>Reclamation Plan</u>

RP 8.5.3 Groundwater

91. Response accepted. (MK, Round 2)

92. Response accepted. (MK, Round 2)

93. Response accepted. (MK, Round 2)

94. Response accepted. (MK, Round 2)

95. Response accepted. (MK, Round 2)

96. Response accepted. (MK, Round 2)

97. Response accepted. (MK, Round 3)

From:	Shannon Payne
To:	andrew.kuhlmann@wyo.gov; Shannon Payne
Subject:	Invitation: 30 days since Ramaco Memo @ Fri Dec 4, 2015 (Andrew Kuhlmann)
Date:	Friday, November 06, 2015 4:21:43 PM
Attachments:	invite.ics

---

30 days since Ramaco Memo

more details »

When Fri Dec 4, 2015

Calendar Andrew Kuhlmann

Who
- shannon.payne@wyo.gov - organizer
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_94.ics (1091 Bytes) cannot be converted to PDF format.

From: BJ Kristiansen
To: mark.rogaczewski@wyo.gov; david.schellinger@wyo.gov; david.myers@wyo.gov; doug.emme@wyo.gov; jaime.jakes@wyo.gov; stacy.page@wyo.gov; Kim Medina; matthew.kunze@wyo.gov; Muthu Kuchanur
Subject: RAMACO CTJ meeting.
Date: Thursday, November 12, 2015 12:02:58 PM

BEGIN:VCALENDAR
PRODID:-//Microsoft Corporation//Outlook 15.0 MIMEDIR//EN
VERSION:2.0
METHOD:REQUEST
X-MS-OLK-FORCEINSPECTOROPEN:TRUE
BEGIN:VTIMEZONE
TZID:Mountain Standard Time
BEGIN:STANDARD
DTSTART:16011104T020000
RRULE:FREQ=YEARLY;BYDAY=1SU;BYMONTH=11
TZOFFSETFROM:-0600
TZOFFSETTO:-0700
END:STANDARD
BEGIN:DAYLIGHT
DTSTART:16010311T020000
RRULE:FREQ=YEARLY;BYDAY=2SU;BYMONTH=3
TZOFFSETFROM:-0700
TZOFFSETTO:-0600
END:DAYLIGHT
END:VTIMEZONE
BEGIN:VEVENT
ATTENDEE;CN=mark.rogaczewski@wyo.gov;RSVP=TRUE:mailto:mark.rogaczewski@wyo.
gov
ATTENDEE;CN=david.schellinger@wyo.gov;RSVP=TRUE:mailto:david.schellinger@wy
o.gov
ATTENDEE;CN=david.myers@wyo.gov;RSVP=TRUE:mailto:david.myers@wyo.gov
ATTENDEE;CN=doug.emme@wyo.gov;RSVP=TRUE:mailto:doug.emme@wyo.gov
ATTENDEE;CN=jaime.jakes@wyo.gov;RSVP=TRUE:mailto:jaime.jakes@wyo.gov
ATTENDEE;CN=stacy.page@wyo.gov;RSVP=TRUE:mailto:stacy.page@wyo.gov
ATTENDEE;CN="Kim Medina";RSVP=TRUE:mailto:kim.medina@wyo.gov
ATTENDEE;CN=matthew.kunze@wyo.gov;RSVP=TRUE:mailto:matthew.kunze@wyo.gov
ATTENDEE;CN="Muthu Kuchanur";RSVP=TRUE:mailto:muthu.kuchanur@wyo.gov
CLASS:PUBLIC
CREATED:20151112T190508Z
DESCRIPTION:Meeting with RAMACO on the Brook Mine permit application for th
ose with continuing issues. Cheyenne can call in if needed.\n
DTEND;TZID="Mountain Standard Time":20151203T120000
DTSTAMP:20151112T190508Z
DTSTART;TZID="Mountain Standard Time":20151203T090000
LAST-MODIFIED:20151112T190508Z
LOCATION:Mnt view room
ORGANIZER;CN="BJ Kristiansen":mailto:bj.kristiansen@wyo.gov
PRIORITY:5
SEQUENCE:0
SUMMARY;LANGUAGE=en-us:RAMACO CTJ meeting.
TRANSP:OPAQUE
UID:040000008200E00074C5B7101A82E0080000000030361DDF391DD101000000000000000
01000000094F82273C59FA04E833588693FDC1C8C
X-ALT-DESC;FMTTYPE=text/html:<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2//E
N">\n<HTML>\n<HEAD>\n<META NAME="Generator" CONTENT="MS Exchange Server ve
rsion rmj.rmm.rup.rpr">\n<TITLE></TITLE>\n</HEAD>\n<BODY>\n<!-- Converted
from text/rtf format -->\n\n<P DIR=LTR><SPAN LANG="en-us"><FONT FACE="Cali

bri">Meeting with RAMACO on the Brook Mine permit application for those wi
th continuing issues. \; Cheyenne can call in if needed.</FONT></SPAN>
<SPAN LANG="en-us"></SPAN></P>\n\n</BODY>\n</HTML>
X-MICROSOFT-CDO-BUSYSTATUS:TENTATIVE
X-MICROSOFT-CDO-IMPORTANCE:1
X-MICROSOFT-CDO-INTENDEDSTATUS:BUSY
X-MICROSOFT-DISALLOW-COUNTER:FALSE
X-MS-OLK-AUTOSTARTCHECK:FALSE
X-MS-OLK-CONFTYPE:0
END:VEVENT
END:VCALENDAR

From:	BJ Kristiansen
To:	mark.rogaczewski@wyo.gov; david.schellinger@wyo.gov; david.myers@wyo.gov; doug.emme@wyo.gov; jaime.jakes@wyo.gov; stacy.page@wyo.gov; Kim Medina; matthew.kunze@wyo.gov; Muthu Kuchanur
Subject:	RAMACO CTJ meeting.
Date:	Thursday, November 12, 2015 12:03:01 PM

--

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	jbarron@wwcengineering.com
Cc:	Kyle Wendtland; mark.rogaczewski@wyo.gov; andrew kuhlmann
Subject:	RAMACO Brook Mine permit application, Surface Use permissions, TFN 6 6/025
Date:	Tuesday, November 17, 2015 6:54:32 AM
Attachments:	image003.jpg

Jeff,

I spoke with Andrew Kuhlman from the AG's office late yesterday afternoon. His office received the last bit of information from Mr. Sansonetti regarding the question of whether they have sufficient landowner consent in his memorandum on November 5, 2015. Andrew's belief was that RAMACO did not complete submitting all of their additional information on that issue until that time and the 30-day statutory timeline on this piece of the permit application started on that date and will end on December 5th. He is supported in that belief by me, Mark Rogaczewski, and Kyle Wendtland, our LQD Administrator. When new, potentially impactful material is received during the application review process, it resets the 30 day clock for assessment of the new information.

Andrew also informed me that the AG's office is close to a decision on the surface access question and will issue a declaration within the next two to three weeks, unless unforeseen circumstances delay it. Please call me with questions concerning this matter. I strongly suggest that you do so as it will help us insure that we are on the same page with this long-standing issue.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Kyle Wendtland
To:	BJ Kristiansen; Alan Edwards
Cc:	Jeff Barron; Mark Rogaczewski; andrew kuhlmann
Subject:	Re: RAMACO Brook Mine permit application, Surface Use permissions, TFN 6 6/025
Date:	Tuesday, November 17, 2015 7:13:36 AM
Attachments:	image003.jpg

BJ:

If Jeff has further questions or issues with this decision, please have him contact Andrew, Alan or myself directly.

Kyle

On Tue, Nov 17, 2015 at 6:56 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Jeff,
>
> I spoke with Andrew Kuhlman from the AG's office late yesterday afternoon. His office received the last bit of information from Mr. Sansonetti regarding the question of whether they have sufficient landowner consent in his memorandum on November 5, 2015. Andrew's belief was that RAMACO did not complete submitting all of their additional information on that issue until that time and the 30-day statutory timeline on this piece of the permit application started on that date and will end on December 5th. He is supported in that belief by me, Mark Rogaczewski, and Kyle Wendtland, our LQD Administrator. When new, potentially impactful material is received during the application review process, it resets the 30 day clock for assessment of the new information.
>
> Andrew also informed me that the AG's office is close to a decision on the surface access question and will issue a declaration within the next two to three weeks, unless unforeseen circumstances delay it. Please call me with questions concerning this matter. I strongly suggest that you do so as it will help us insure that we are on the same page with this long-standing issue.
>
> -bj
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3
>
> th

2100 W. 5 St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Kyle Wendtland
Subject:	RE: RAMACO Brook Mine permit application, Surface Use permissions, TFN 6 6/025
Date:	Tuesday, November 17, 2015 7:31:28 AM
Attachments:	image001.jpg

You bet, Kyle. I'll let him know.

From: Kyle Wendtland [mailto:kyle.wendtland@wyo.gov]
Sent: Tuesday, November 17, 2015 7:14 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>
Cc: Jeff Barron <jbarron@wwcengineering.com>; Mark Rogaczewski <mark.rogaczewski@wyo.gov>; andrew kuhlmann <andrew.kuhlmann@wyo.gov>
Subject: Re: RAMACO Brook Mine permit application, Surface Use permissions, TFN 6 6/025

BJ:

If Jeff has further questions or issues with this decision, please have him contact Andrew, Alan or myself directly.

Kyle

On Tue, Nov 17, 2015 at 6:56 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Jeff,
>
> I spoke with Andrew Kuhlman from the AG's office late yesterday afternoon. His office received the last bit of information from Mr. Sansonetti regarding the question of whether they have sufficient landowner consent in his memorandum on November 5, 2015. Andrew's belief was that RAMACO did not complete submitting all of their additional information on that issue until that time and the 30-day statutory timeline on this piece of the permit application started on that date and will end on December 5th. He is supported in that belief by me, Mark Rogaczewski, and Kyle Wendtland, our LQD Administrator. When new, potentially impactful material is received during the application review process, it resets the 30 day clock for assessment of the new information.
>
> Andrew also informed me that the AG's office is close to a decision on the surface access question and will issue a declaration within the next two to three weeks, unless unforeseen circumstances delay it. Please call me with questions concerning this matter. I strongly suggest that you do so as it will help us insure that we are on the same page with this long-standing issue.
>
> -bj
>
> Bj Kristiansen, P.G.
> Department of Environmental Quality
> Natural Resources Program Principal
> Land Quality Division - District 3
> 2100 W. 5th St.

Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Hidden Water Creek question
Date: Wednesday, November 18, 2015 4:22:15 PM

Hi Bj,

I am working on Hidden Water Creek section for the Brook Mine CHIA and have a question I thought you might know something about since you worked at Big Horn Mine:

Do you know anything about a mine shaft sinkhole on Hidden Water Creek? The Big Horn Mine D6 describes a sinkhole that developed in an old diversion associated with the Acme No. 1 underground mine. The D6 states that flows were observed to disappear into the sinkhole which they thought then entered a shaft of the Acme No. 1 mine.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Muthu Kuchanur
To:	Shannon Anderson
Cc:	Matthew Kunze; BJ Kristiansen; Carol Bilbrough
Subject:	Re: CHIA for Ramaco permit
Date:	Thursday, November 19, 2015 9:33:21 AM

Hi Shannon,

Thanks for checking on the status of the Brook Mine CHIA. I have cc'ed Matt Kunze and he would be able to give you an update on the CHIA status. On the AVF determination, Sheridan Office and BJ would handle that aspect of the permitting process.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82001

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Thu, Nov 19, 2015 at 9:17 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Hi Muthu, I visited the Sheridan DEQ office yesterday to check in about the Ramaco permitting process and BJ didn't know the status of the CHIA and suggested that I contact you to inquire about that. Could you let me know the status?
>
> Also I wanted to check in about the AVF designation that is being considered by DEQ in relation to the permit. Is that something handled from Cheyenne or Sheridan?
>
> Thanks so much,
>
> Shannon
>
> Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Shannon Anderson
Cc:	BJ Kristiansen; Carol Bilbrough; Muthu Kuchanur; Mark Rogaczewski
Subject:	Re: CHIA for Ramaco permit
Date:	Thursday, November 19, 2015 10:26:43 AM

Hi Shannon,

As to the CHIA status, we are currently working on the initial sections of the document. There are still some outstanding hydrology-related comments on the permit application that need resolved before we will be able to have a draft CHIA completed.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Thu, Nov 19, 2015 at 9:33 AM, Muthu Kuchanur <muthu.kuchanur@wyo.gov> wrote:

> Hi Shannon,
>
> Thanks for checking on the status of the Brook Mine CHIA. I have cc'ed Matt Kunze and he would be able to give you an update on the CHIA status. On the AVF determination, Sheridan Office and BJ would handle that aspect of the permitting process.
>
> Best regards,
> Muthu
>
> ---
> Muthu Kuchanur, Ph.D., P.E.
>
> Geology Supervisor,
> Division Services - Land Quality Division,
> Wyoming Department of Environmental Quality,
> Cheyenne - 82001
>
> Phone: 307-777-7132
> Email: muthu.kuchanur@wyo.gov
>
> On Thu, Nov 19, 2015 at 9:17 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
>
> > Hi Muthu, I visited the Sheridan DEQ office yesterday to check in about the Ramaco permitting process and BJ didn't know the status of the CHIA and

suggested that I contact you to inquire about that. Could you let me know the status?

Also I wanted to check in about the AVF designation that is being considered by DEQ in relation to the permit. Is that something handled from Cheyenne or Sheridan?

Thanks so much,

Shannon

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Shannon Anderson
To: Matthew Kunze; sanderson@powderriverbasin.org
Subject: RE: CHIA for Ramaco permit
Date: Thursday, November 19, 2015 12:20:49 PM

Thanks, Matt -

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Thursday, November 19, 2015 10:26 AM
To: Shannon Anderson
Cc: BJ Kristiansen; Carol Bilbrough; Muthu Kuchanur; Mark Rogaczewski
Subject: Re: CHIA for Ramaco permit

Hi Shannon,

As to the CHIA status, we are currently working on the initial sections of the document. There are still some outstanding hydrology-related comments on the permit application that need resolved before we will be able to have a draft CHIA completed.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Thu, Nov 19, 2015 at 9:33 AM, Muthu Kuchanur <muthu.kuchanur@wyo.gov> wrote:
Hi Shannon,

Thanks for checking on the status of the Brook Mine CHIA. I have cc'ed Matt Kunze and he would be able to give you an update on the CHIA status. On the AVF determination, Sheridan Office and BJ would handle that aspect of the permitting process.

Best regards,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,

Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82001

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Thu, Nov 19, 2015 at 9:17 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Hi Muthu, I visited the Sheridan DEQ office yesterday to check in about the Ramaco permitting process and BJ didn't know the status of the CHIA and suggested that I contact you to inquire about that. Could you let me know the status?

Also I wanted to check in about the AVF designation that is being considered by DEQ in relation to the permit. Is that something handled from Cheyenne or Sheridan?

Thanks so much,
Shannon

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	david.myers@wyo.gov; david.schellinger@wyo.gov; doug.emme@wyo.gov; jaime.jakes@wyo.gov; stacy.page@wyo.gov; Kim Medina; matthew.kunze@wyo.gov; Muthu Kuchanur; andrew kuhlmann
Cc:	mark.rogaczewski@wyo.gov
Subject:	RAMACO Brook Mine meeting, Brook Mine Permit Application, TFN 6 2/025
Date:	Tuesday, December 01, 2015 1:34:39 PM
Attachments:	image002.jpg

Folks,

Just a remainder that we will be meeting with RAMACO on Thursday (Dec. 3) to discuss outstanding issues that are road-blocking the Brook Mine permit application. Now that we have gone through three rounds of comments, it is time to iron out differences between LQD and RAMCO that may be inhibiting the next phase of permit issuance. Please plan on attending the meeting on Thursday morning IF YOU HAVE OUTSTANDING ISSUES WITH THE BROOK MINE APPLICATION. If you have no issues that need to be addressed, you can continue on throughout your day with a clear conscience. Otherwise, we will see you on Thursday morning at 9:00 in the Mountain View Room. If you are unable to attend the meeting but have substantive issues, please let me know and we will address them.

Cheyennites, I have been in contact with you over the past few months and we seem to have worked out many of the issues that have come up over the last year. If you folks have any issues you want represented at the meeting, please contact me and I will forward them to RAMACO on Thursday. Muthu and Matt, let me know where we are with the CHIA. I know you are working with WWC on the modeling issues and that may slow you down. Otherwise, we can hopefully move forward with most of the difficulties resolved after the meeting.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	david.myers@wyo.gov; david.schellinger@wyo.gov; doug.emme@wyo.gov; jaime.jakes@wyo.gov; stacy.page@wyo.gov; Kim Medina; matthew.kunze@wyo.gov; Muthu Kuchanur; andrew kuhlmann
Cc:	mark.rogaczewski@wyo.gov
Subject:	RAMACO Brook Mine meeting, Brook Mine Permit Application, TFN 6 2/025
Date:	Tuesday, December 01, 2015 1:34:39 PM
Attachments:	image002.jpg

Folks,

Just a remainder that we will be meeting with RAMACO on Thursday (Dec. 3) to discuss outstanding issues that are road-blocking the Brook Mine permit application. Now that we have gone through three rounds of comments, it is time to iron out differences between LQD and RAMCO that may be inhibiting the next phase of permit issuance. Please plan on attending the meeting on Thursday morning IF YOU HAVE OUTSTANDING ISSUES WITH THE BROOK MINE APPLICATION. If you have no issues that need to be addressed, you can continue on throughout your day with a clear conscience. Otherwise, we will see you on Thursday morning at 9:00 in the Mountain View Room. If you are unable to attend the meeting but have substantive issues, please let me know and we will address them.

Cheyennites, I have been in contact with you over the past few months and we seem to have worked out many of the issues that have come up over the last year. If you folks have any issues you want represented at the meeting, please contact me and I will forward them to RAMACO on Thursday. Muthu and Matt, let me know where we are with the CHIA. I know you are working with WWC on the modeling issues and that may slow you down. Otherwise, we can hopefully move forward with most of the difficulties resolved after the meeting.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Matthew Kunze; BJ Kristiansen
Subject: Notification: RAMACO CTJ meeting. @ Thu Dec 3, 2015 9am - 12pm (Matthew Kunze)
Date: Thursday, December 03, 2015 8:45:03 AM

RAMACO CTJ meeting.

more details »

Meeting with RAMACO on the Brook Mine permit application for those with continuing issues. Cheyenne can call in if needed.

When Thu Dec 3, 2015 9am – 12pm Mountain Time

Where Mnt view room (map)

Calendar Matthew Kunze

Who
- BJ Kristiansen - organizer
- Matthew Kunze - creator
- david.myers@wyo.gov
- doug.emme@wyo.gov
- stacy.page@wyo.gov
- Muthu Kuchanur
- mark.rogaczewski@wyo.gov
- Kim Medina
- david.schellinger@wyo.gov
- jaime.jakes@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for notifications on calendar Matthew Kunze.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Mark Rogaczewski; BJ Kristiansen
Subject: Notification: RAMACO CTJ meeting. @ Thu Dec 3, 2015 9am - 12pm (Mark Rogaczewski)
Date: Thursday, December 03, 2015 8:49:47 AM

RAMACO CTJ meeting.

more details »

Meeting with RAMACO on the Brook Mine permit application for those with continuing issues. Cheyenne can call in if needed.

When Thu Dec 3, 2015 9am – 12pm Mountain Time

Where Mnt view room (map)

Calendar Mark Rogaczewski

Who
- BJ Kristiansen - organizer
- Mark Rogaczewski - creator
- jaime.jakes@wyo.gov
- david.myers@wyo.gov
- stacy.page@wyo.gov
- Kim Medina
- matthew.kunze@wyo.gov
- david.schellinger@wyo.gov
- doug.emme@wyo.gov
- Muthu Kuchanur

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for notifications on calendar Mark Rogaczewski.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: David Schellinger; BJ Kristiansen
Subject: Notification: RAMACO CTJ meeting. @ Thu Dec 3, 2015 9am - 12pm (david.schellinger@wyo.gov)
Date: Thursday, December 03, 2015 8:49:48 AM

RAMACO CTJ meeting.

more details »

Meeting with RAMACO on the Brook Mine permit application for those with continuing issues. Cheyenne can call in if needed.

When Thu Dec 3, 2015 9am – 12pm Mountain Time

Where Mnt view room (map)

Calendar david.schellinger@wyo.gov

Who
- BJ Kristiansen - organizer
- david.schellinger@wyo.gov - creator
- Muthu Kuchanur
- mark.rogaczewski@wyo.gov
- doug.emme@wyo.gov
- stacy.page@wyo.gov
- david.myers@wyo.gov
- matthew.kunze@wyo.gov
- jaime.jakes@wyo.gov
- Kim Medina

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account david.schellinger@wyo.gov because you are subscribed for notifications on calendar david.schellinger@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Doug Emme; BJ Kristiansen
Subject: Notification: RAMACO CTJ meeting. @ Thu Dec 3, 2015 9am - 12pm (Doug Emme)
Date: Thursday, December 03, 2015 8:49:59 AM

RAMACO CTJ meeting.

more details »

Meeting with RAMACO on the Brook Mine permit application for those with continuing issues. Cheyenne can call in if needed.

When Thu Dec 3, 2015 9am – 12pm Mountain Time

Where Mnt view room (map)

Calendar Doug Emme

Who
- BJ Kristiansen - organizer
- Doug Emme - creator
- mark.rogaczewski@wyo.gov
- david.schellinger@wyo.gov
- david.myers@wyo.gov
- Muthu Kuchanur
- jaime.jakes@wyo.gov
- Kim Medina
- matthew.kunze@wyo.gov
- stacy.page@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account doug.emme@wyo.gov because you are subscribed for notifications on calendar Doug Emme.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Muthu Kuchanur; BJ Kristiansen
Subject: Notification: RAMACO CTJ meeting. @ Thu Dec 3, 2015 9am - 12pm (muthu.kuchanur@wyo.gov)
Date: Thursday, December 03, 2015 8:50:08 AM

RAMACO CTJ meeting.

more details »

Meeting with RAMACO on the Brook Mine permit application for those with continuing issues. Cheyenne can call in if needed.

When Thu Dec 3, 2015 9am – 12pm Mountain Time

Where Mnt view room (map)

Calendar muthu.kuchanur@wyo.gov

Who
- BJ Kristiansen - organizer
- muthu.kuchanur@wyo.gov - creator
- david.myers@wyo.gov
- doug.emme@wyo.gov
- mark.rogaczewski@wyo.gov
- david.schellinger@wyo.gov
- jaime.jakes@wyo.gov
- matthew.kunze@wyo.gov
- stacy.page@wyo.gov
- Kim Medina

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account muthu.kuchanur@wyo.gov because you are subscribed for notifications on calendar muthu.kuchanur@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	andrew kuhlmann
To:	Thomas Sansonetti; Isaac Sutphin
Subject:	Brook Mining"s mine permit application - Round 3 Comments
Date:	Friday, December 04, 2015 8:31:54 AM
Attachments:	Round 3 Comments.pdf

Tom and Isaac,

Attached is a copy of the Department of Environmental Quality, Land Quality Division's Round 3 Comments on the Adjudication Section of Brook Mining's mine permit application. DEQ is also sending (or has already sent) a copy of this to Brook Mining's consultant. Please let me know if you have any questions about the comments.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

Supplemental Round 3 Documents Review
Brook Coal Mine Permit Application, TFN 6 2/025
Wyoming State Attorney General's Office for LQD
Mr. Andrew Kuhlman

December 3, 2015

The Department of Environmental Quality, Land Quality Division ("Division") has received the Applicant's responses to the Department's most recent round of comments and questions regarding the Application's adjudication section. The Applicant responded in three parts. First, the Applicant provided to the Division copies of the pleadings involved in the ongoing litigation, Brook Mining Company, LLC v. Big Horn Coal Company, Civil No. CV 2014-372, currently before the Wyoming Fourth Judicial District Court. Second, in a letter dated October 13, 2015, the Applicant responded to the Division's supplemental questions, which were based upon the contents of the provided court pleadings. Third, the Applicant's legal counsel provided a memo, dated November 5, 2015, which discussed legal interests that arose from the 1954 Deed provided in the Application with regard to the Padlock Ranch Company ("Padlock Ranch").

The Division has reviewed the Applicant's responses. Each of the responses has helped the Division to further evaluate the Application. However, the Division has determined that, at this time, the Application is still deficient and not yet technically adequate and suitable for publication regarding the requirements of Wyoming Statutes § 35-11-406(a)(ii) and -406(b)(xi)-(xii), and Chapter 2, Section 2 of the Division's rules and regulations for coal operations. This determination results from two issues for which the Division requests additional information from the Applicant.

1. With respect to the lands conveyed by the 1954 Deed, the Applicant's position appears to be that it (through its mineral lease) or Ramaco Wyoming Coal, LLC, ("Ramaco") (as present owner of the mineral rights) hold the legal rights necessary to make one of them the "surface landowner" for the purposes of the landowner consent requirements under Wyoming Statute § 35-11-406(b)(xi)-(xii). This position conflicts with the Big Horn Coal Company ("Big Horn") or the Padlock Ranch being the "surface landowners" based on their surface rights acquired under the 1954 Deed. Contrary to the Applicant's position, based upon the information available to the Division, neither Ramaco nor the Applicant appear to qualify as the "surface owner / surface landowner" or "resident or agricultural landowner" under Subsections -406(b)(xi) or (xii). See Belle Fourche Pipeline Co. v. State, 766 P.2d 537, 541-550 (Wyo. 1988). Therefore, the Division requests that the Applicant provide any additional facts that demonstrate that either it or Ramaco qualify as one of those entities who can grant an instrument of consent as required by Subsections -406(b)(xi) or (xii).

2. If Big Horn or Padlock Ranch are "surface owners" under Wyoming Statute § 35-11-406(xi)-(xii), the Division must determine whether the 1954 Deed still qualifies as an "instrument of consent" from those surface owners necessary to meet the statutory and regulatory requirements. As noted in the Division's first and second round of comments on the adjudication section of the Application, in order for the Division to determine compliance, the Division must determine whether Subsection -406(b)(xi) or Subsection -406(b)(xii) might apply

to this Application. The Division continues to lack sufficient information on the record to make this determination, and therefore again asks that the Applicant provide additional information.

Specifically, the Division requests that the Applicant state (and provide supporting information) whether or not Big Horn and Padlock Ranch are “resident or agricultural landowners” under the statutory definition in Wyoming Statute § 35-11-406(b)(xii). The Division recognizes and notes for this issue that the Applicant’s position is that the surface landowner under the 1954 Deed is not “different than the owner of the mineral estate,” for the purposes of Subsections -406(b)(xi) and (xii). However, the Division requires information about whether Big Horn and Padlock Ranch each do, or do not, satisfy the remaining requirements under the definition of “resident or agricultural landowner”.

End of Round 3 comments by Mr. Andrew Kuhlman

From: Thomas Sansonetti
To: andrew kuhlmann
Subject: Automatic reply: Brook Mining"s mine permit application - Round 3 Comments
Date: Friday, December 04, 2015 8:32:47 AM

I am out of the office, returning Thursday, Dec. 10. I will be checking my emails periodically. If you need assistance before my return, please contact one of my secretaries, Sandy Fletcher (303-290-1612) or Valerie Arias (307-778-4212. Thanks, Tom

From: BJ Kristiansen
To: Matthew Kunze
Subject: RE: Hidden Water Creek question
Date: Friday, December 04, 2015 10:10:30 AM

Matt,

I don't think I answered this or, if I did, I spaced it. I don't remember any specific examples of Hidden Water Creek being affected by a sinkhole or old underground workings. I know it used to happen from time to time but I don't remember any specifics.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, November 18, 2015 4:22 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Hidden Water Creek question

Hi Bj,

I am working on Hidden Water Creek section for the Brook Mine CHIA and have a question I thought you might know something about since you worked at Big Horn Mine:

Do you know anything about a mine shaft sinkhole on Hidden Water Creek? The Big Horn Mine D6 describes a sinkhole that developed in an old diversion associated with the Acme No. 1 underground mine. The D6 states that flows were observed to disappear into the sinkhole which they thought then entered a shaft of the Acme No. 1 mine.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Hidden Water Creek question
Date: Friday, December 04, 2015 10:42:12 AM

Ok thanks, I was just curious. It would have been interesting to take a look in the field if we had time, or maybe even ask about it in the review if I had seen it sooner. There could be more in the Big Horn permit on it that I have not seen yet, as this area I believe was near Pit 4 that was fully bond released and taken out of the permit area.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Fri, Dec 4, 2015 at 10:12 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I don't think I answered this or, if I did, I spaced it. I don't remember any specific examples of Hidden Water Creek being affected by a sinkhole or old underground workings. I know it used to happen from time to time but I don't remember any specifics.
>
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Wednesday, November 18, 2015 4:22 PM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** Hidden Water Creek question
>
> Hi Bj,
>
> I am working on Hidden Water Creek section for the Brook Mine CHIA and have a question I thought you might know something about since you worked at Big Horn Mine:

Do you know anything about a mine shaft sinkhole on Hidden Water Creek? The Big Horn Mine D6 describes a sinkhole that developed in an old diversion associated with the Acme No. 1 underground mine. The D6 states that flows were observed to disappear into the sinkhole which they thought then entered a shaft of the Acme No. 1 mine.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

200 West 17th Street, Lower Level

Cheyenne, WY 82002

307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Isaac Sutphin
To:	andrew kuhlmann; Thomas Sansonetti
Subject:	RE: Brook Mining"s mine permit application - Round 3 Comments
Date:	Friday, December 04, 2015 3:50:42 PM
Attachments:	image001.gif

Thanks, Andrew.

I understand from Tom that we are going to have a discussion on Monday morning. I will send a meeting reminder in a moment and will include the information to dial in for a conference call.

Have a great weekend!

IS

Isaac N. Sutphin, P.C.
Partner

CONFIDENTIALITY NOTICE: This message is confidential and may be privileged. If you believe that this email has been sent to you in error, please reply to the sender that you received the message in error; then please delete this e-mail. Thank you.

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Friday, December 04, 2015 8:32 AM
To: Thomas Sansonetti; Isaac Sutphin
Subject: Brook Mining's mine permit application - Round 3 Comments

Tom and Isaac,

Attached is a copy of the Department of Environmental Quality, Land Quality Division's Round 3 Comments on the Adjudication Section of Brook Mining's mine permit application. DEQ is also sending (or has already sent) a copy of this to Brook Mining's consultant. Please let me know if you have any questions about the comments.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue ***Please note the new mailing address**
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is

intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

HOLLAND&HART LLP

THE LAW OUT WEST

From: andrew.kuhlmann@wyo.gov
To: insutphin@hollandhart.com; andrew.kuhlmann@wyo.gov
Subject: Accepted: Ramaco/Brook Permitting Discussion @ Mon Dec 7, 2015 9:30am - 10:30am (Andrew Kuhlmann)
Date: Friday, December 04, 2015 4:18:21 PM
Attachments: invite.ics

---

andrew.kuhlmann@wyo.gov has accepted this invitation.

Ramaco/Brook Permitting Discussion

Call In Number: 1-877-270-3379

Conference ID: 8959836

When Mon Dec 7, 2015 9:30am – 10:30am Mountain Time

Where Phone (map)

Calendar Andrew Kuhlmann

Who
- insutphin@hollandhart.com - organizer
- andrew.kuhlmann@wyo.gov - creator
- Thomas Sansonetti
- Jeffrey S. Pope

Invitation from Google Calendar

You are receiving this courtesy email at the account insutphin@hollandhart.com because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at https://www.google.com/calendar/ and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_95.ics (1085 Bytes) cannot be converted to PDF format.

From: Google Calendar
To: andrew kuhlmann; insutphin@hollandhart.com
Subject: Notification: Ramaco/Brook Permitting Discussion @ Mon Dec 7, 2015 9:30am - 10:30am (Andrew Kuhlmann)
Date: Monday, December 07, 2015 9:19:48 AM

Ramaco/Brook Permitting Discussion

more details »

Call In Number: 1-877-270-3379

Conference ID: 8959836

When Mon Dec 7, 2015 9:30am – 10:30am Mountain Time

Where Phone (map)

Calendar Andrew Kuhlmann

Who
- insutphin@hollandhart.com - organizer
- andrew.kuhlmann@wyo.gov - creator
- Thomas Sansonetti
- Jeffrey S. Pope

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for notifications on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	andrew kuhlmann
Subject:	All 3 rounds of Brook Mine comments, andrew kuhlman files, tfn 6 2/025
Date:	Wednesday, December 09, 2015 2:51:20 PM
Attachments:	all andrew comments first 3 rounds.pdf image001.jpg

---

Andrew,

I combined the comments you submitted since the beginning of this quest. Let me know if you need anything else.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: File, Brook Mine Permit Application, TFN 6 6/025

RE: Comments on ADJUDICATION, B.H.C. 1-3, Warranty Deed, July 27, 1954

FROM: Wyoming Attorney General's Office

DATE: April 1, 2015

The Land Quality Division has determined that this Application is deficient and is not yet technically adequate and suitable for publication regarding the requirements of Wyoming Statutes § 35-11-406(a)(ii) and (b)(xi)-(xii), and Chapter 2, Section 2 of the Division's rules and regulations for coal operations. In order for the Division to determine whether the Application meets these requirements, the Division needs the Applicant to address the following issues:

1. On March 9, 2015, the Division received a letter from attorney, Lynne Boomgaarden, on behalf of her client, Big Horn Coal Company. The letter described Big Horn Coal Company's concerns with the Application. Near the bottom of the second page, the letter states: "The extent of Brook Mining's right to use BHC surface lands under the 1954 deed currently is being litigated pursuant to a Declaratory Judgment Complaint filed by Brook Mining in *Brook Mining Company, LLC v. Big Horn Coal Company*, Civil Action No. CV 2014-372, and will be determined by the Fourth Judicial District Court for Sheridan County, Wyoming." A copy of that letter is included with these comments.

Chapter 2, Section 2(a)(iii) of the Division's coal rules states, "The right of entry statements and documents required by W.S. § 35-11-406(a)(ii) and (b)(xi) shall clearly explain and support the legal rights claimed by the applicant and shall also include whether that right is the subject of pending litigation[.]" In the spirit of that provision, the Division asks the Applicant to provide information about the case referenced in Big Horn Coal Company's letter and any similar pending litigation. At a minimum, the Division requests a summary of the circumstances that led to the case, the factual and legal questions at issue, and the case's current status. Please also provide copies of the complaint and the answer. If there are any motions that the court has ruled on limiting or deciding any of the claims or factual or legal questions originally at issue in the case, please also provide copies of the orders, the motions, the responses to the motions, and any supporting memoranda.

2. The Adjudication section of the Application includes copies of the deeds and surface access agreements and consent forms that the Applicant believes satisfy the requirements of W.S. § 35-11-406(a)(ii) and (b)(xi)-(xii), and Chapter 2, Section 2(a) of the Division's rules. However, the Application does not contain access agreements or consent forms for two surface owners within the permit area, Padlock Ranch Company and Big Horn Coal Company. In order to determine the Application's compliance with the statutory and regulatory requirements, the Division needs to be able to determine whether W.S. §§ 35-11-406(b)(xi) or -406(b)(xii) apply to this Application. Therefore, the Division requests the Applicant to provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch Company and Big Horn Coal Company are or are not "residential or agricultural landowners" under the statutory definition in W.S. § 35-11-406(b)(xi).

Coal Mine Permit Application, RAMACO Brook Mine, TFN 6 2/025
Round 2 Comments -

Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office

ADJUDICATION – SURFACE OWNER CONSENT in Lieu of LQD FORM 8

In response to the Division's previous comments, the Applicant described its interpretation of the 1954 Deed that governs the property rights of the Applicant, Padlock Ranch Company, and Big Horn Coal Company on the lands subject to that deed. The Applicant also discussed its ongoing litigation with Big Horn Coal (Civil Action No. CV 2014-372), and provided case law and two pleadings related to its motion for summary judgment in that case. The Applicant asserted that based on the 1954 Deed, it has the "sole dominant surface ownership and use interest" for the purposes of W.S. 35-11-406(b)(xi)-(xii).

The Land Quality Division has reviewed the Applicant's responses and determined that, at this time, the Application is still deficient and is not yet technically adequate and suitable for publication with regard to the requirements of Wyoming Statutes §§ 35-11-406(a)(ii) and -406(b)(xi)-(xii), and Chapter 2, Section 2 of the Division's rules and regulations for coal operations. The Division requests the Applicant to address the following issues:

1. Please provide copies of the following documents related to the state district court litigation between the Applicant/Ramaco and Big Horn Coal Company:

- The complaint and answer filed in the case (if either has been amended, only the most recent amended version needs to be provided).
- For the Applicant's summary judgment motion: Big Horn Coal's response to the motion.
- For Big Horn Coal's motion for summary judgment: the memo supporting that motion, the Applicant's response to the motion, and Big Horn Coal's reply memorandum.
- The "Section 5" of the "May 6, 1983, Release Agreement" that the Applicant mentioned in its reply in support of its summary judgment motion.
- When it is available, the district court's order deciding the Applicant's and Big Horn Coal's summary judgment motions.

2. Please also provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch or Big Horn Coal qualify as a "resident or agricultural landowner," as defined in W.S. § 35-11-406(b)(xi). The statutory requirements for a permit application differ depending on whether that status exists, and the Division must determine which set of requirements (W.S. § 35-11-406(b)(xi) or -406(b)(xii)) may apply to this Application.

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

September 16, 2015

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Round 2 Technical Review, **Supplemental Documents**, Brook Mine Coal Mine Permit Application, TFN 6 2/025

Dear : Mr. Atkins

The Land Quality Division received your Round 1 Supplementary comment responses from your application for a Permit to Mine Coal on August 20, 2015. The statutory requirement for LQD to respond to the first round Supplemental responses is 30 days from date of receipt, which is September 19, 2015. The responses from your consultants have been reviewed in their entirety by the State Attorney General's Office and comments, questions, noteworthy deficiencies, and requests for additional information were generated for Round 2. These have been gathered by the permit coordinator and are presented as an attachment to this letter.

Please review the Supplemental Second Round evaluation comments and prepare your replies accordingly. When you have completed the Round 2 assessment of our commentaries, send your responses to the LQD office in Sheridan to begin the Round 3 Technical Evaluation. Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round I Supplemental materials. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III

Cc: Cheyenne LQD files w/attachment

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

Supplemental Round 1 Documents Review, TFN 6 2/025
Wyoming State Attorney General's Office for LQD
Mr. Andrew Kuhlman
September 16, 2015

The Wyoming Department of Environmental Quality, Land Quality Division ("LQD") received the litigation documents you provided in response to LQD's comments on the adjudication section of the permit application. LQD anticipates receiving your responses to the other outstanding requests regarding that section of the application. In the meantime, LQD has begun reviewing the legal documents you provided. Based on our review so far, we have developed some additional questions regarding the adjudication section.

According to the documents submitted for the permit application, Brook Mining believes that its rights under the 1954 Deed apply to the properties of Big Horn Coal Company and Padlock Ranch Company. The litigation filings provided by Brook Mining indicate that there is a dispute whether a 1980 lease release agreement between Big Horn and Sheridan-Wyoming Coal Company may have affected each party's rights under the 1954 Deed. This situation raises a few questions:

1. Would the 1980 release agreement apply to the surface rights that originate with the 1954 Deed and are currently owned by Padlock Ranch? Did Padlock Ranch obtain its rights at issue before or after the 1980 release agreement?

2. If one assumes that Big Horn's arguments in the litigation are correct that the 1980 release agreement granted Big Horn rights greater than those under the 1954 Deed, would Big Horn's arguments and the rights it argues that it obtained through the release agreement also apply to any of Padlock Ranch's lands?

3. Are there any contractual documents or property records related to Padlock Ranch's lands that arguably may have altered Padlock Ranch's rights under the 1954 Deed? If so, please provide copies of those documents and explain the nature of the documents and how they may have affected Padlock Ranch's rights.

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

December 4, 2015

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Round 3 Technical Review, Brook Mine Coal Mine Permit Application, Adjudication Volume, TFN 6 2/025

Dear : Mr. Atkins

The Land Quality Division received your Round 2 Adjudication comment responses from Holland and Hart on November 5, 2015. The statutory requirement for LQD to respond to the second round responses is 30 days from date of receipt, which is December 5, 2015. The responses from your attorneys have been reviewed in their entirety and comments, questions, noteworthy deficiencies, and requests for additional information were generated for Round 3. These have been gathered by the permit coordinator and are presented as an attachment to this letter.

Please review the Third Round Adjudication comments and prepare your replies accordingly. Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round 3 materials. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III

Cc: Cheyenne LQD files w/attachment

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

Supplemental Round 3 Documents Review
Brook Coal Mine Permit Application, TFN 6 2/025
Wyoming State Attorney General's Office for LQD
Mr. Andrew Kuhlman

December 3, 2015

The Department of Environmental Quality, Land Quality Division ("Division") has received the Applicant's responses to the Department's most recent round of comments and questions regarding the Application's adjudication section. The Applicant responded in three parts. First, the Applicant provided to the Division copies of the pleadings involved in the ongoing litigation, Brook Mining Company, LLC v. Big Horn Coal Company, Civil No. CV 2014-372, currently before the Wyoming Fourth Judicial District Court. Second, in a letter dated October 13, 2015, the Applicant responded to the Division's supplemental questions, which were based upon the contents of the provided court pleadings. Third, the Applicant's legal counsel provided a memo, dated November 5, 2015, which discussed legal interests that arose from the 1954 Deed provided in the Application with regard to the Padlock Ranch Company ("Padlock Ranch").

The Division has reviewed the Applicant's responses. Each of the responses has helped the Division to further evaluate the Application. However, the Division has determined that, at this time, the Application is still deficient and not yet technically adequate and suitable for publication regarding the requirements of Wyoming Statutes § 35-11-406(a)(ii) and -406(b)(xi)-(xii), and Chapter 2, Section 2 of the Division's rules and regulations for coal operations. This determination results from two issues for which the Division requests additional information from the Applicant.

1. With respect to the lands conveyed by the 1954 Deed, the Applicant's position appears to be that it (through its mineral lease) or Ramaco Wyoming Coal, LLC, ("Ramaco") (as present owner of the mineral rights) hold the legal rights necessary to make one of them the "surface landowner" for the purposes of the landowner consent requirements under Wyoming Statute § 35-11-406(b)(xi)-(xii). This position conflicts with the Big Horn Coal Company ("Big Horn") or the Padlock Ranch being the "surface landowners" based on their surface rights acquired under the 1954 Deed. Contrary to the Applicant's position, based upon the information available to the Division, neither Ramaco nor the Applicant appear to qualify as the "surface owner / surface landowner" or "resident or agricultural landowner" under Subsections -406(b)(xi) or (xii). See Belle Fourche Pipeline Co. v. State, 766 P.2d 537, 541-550 (Wyo. 1988). Therefore, the Division requests that the Applicant provide any additional facts that demonstrate that either it or Ramaco qualify as one of those entities who can grant an instrument of consent as required by Subsections -406(b)(xi) or (xii).

2. If Big Horn or Padlock Ranch are "surface owners" under Wyoming Statute § 35-11-406(xi)-(xii), the Division must determine whether the 1954 Deed still qualifies as an "instrument of consent" from those surface owners necessary to meet the statutory and regulatory requirements. As noted in the Division's first and second round of comments on the adjudication section of the Application, in order for the Division to determine compliance, the Division must determine whether Subsection -406(b)(xi) or Subsection -406(b)(xii) might apply

to this Application. The Division continues to lack sufficient information on the record to make this determination, and therefore again asks that the Applicant provide additional information.

Specifically, the Division requests that the Applicant state (and provide supporting information) whether or not Big Horn and Padlock Ranch are “resident or agricultural landowners” under the statutory definition in Wyoming Statute § 35-11-406(b)(xii). The Division recognizes and notes for this issue that the Applicant’s position is that the surface landowner under the 1954 Deed is not “different than the owner of the mineral estate,” for the purposes of Subsections -406(b)(xi) and (xii). However, the Division requires information about whether Big Horn and Padlock Ranch each do, or do not, satisfy the remaining requirements under the definition of “resident or agricultural landowner”.

End of Round 3 comments by Mr. Andrew Kuhlman

From:	BJ Kristiansen
To:	david.myers@wyo.gov; david.schellinger@wyo.gov; doug.emme@wyo.gov; jaime.jakes@wyo.gov; Kim Medina; stacy.page@wyo.gov; matthew.kunze@wyo.gov; Muthu Kuchanur
Cc:	mark.rogaczewski@wyo.gov
Subject:	Brook Mine Permit Application, ROUND 3 comment responses and Round 4 comments, TFN 6 2/025
Date:	Thursday, December 10, 2015 11:28:50 AM
Attachments:	image002.jpg

Folks,

We received the Brook mine Round 3 comment responses back from Ramaco/WWC on December 8, 2015. The 30 review period will end on January 7, 2016. Since we met with WWC last week, I believe that most of our comments have been answered to LQD standards. Please review the segments that you were responsible for and perform a Round 4 assessment, if necessary. If you do have comments, please meet with me as soon as possible so the issues can be resolved with WWC/Ramaco in a timely manner. I would like to resolve any commentary by the end of the year, if possible. We are at a point where the only meaningful outstanding issues are the AVF determination, The CHIA, and surface use differences.

Let me know if there are any problems with the review schedule, since we have Christmas and New Year's coming up.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Kurt King
Cc:	Muthu Kuchanur
Subject:	Re: Review Request for Review of First Round Responses for Belle Ayr North Amendment Application; Belle Ayr Mine Permit 214-T8, TFN 5 3/160
Date:	Thursday, December 10, 2015 12:31:58 PM
Attachments:	MDK_Second Round Comments on Belle Ayr North Amendment_TFN 5 3-160.docx

Hi Kurt,

Please find my attached review. There are still a few outstanding items that need addressed.

As far as the CHIA, I had started to update it over the summer but have not gotten back to it for a while. Since we just completed the Caballo CHIA in the same area, it is mostly a matter of adding one more year of monitoring data from the four mines and updating all the maps for the Belle Ayr amendment. I have been pretty busy on the Brook Mine CHIA, but hope to get back to the Belle Ayr CHIA soon. Some of our outstanding comments on the amendment also will need addressed before we can finish the CHIA.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Fri, Nov 20, 2015 at 10:27 AM, Kurt King <kurt.king@wyo.gov> wrote:

> Hell
>
> Hello All:
>
> Land Quality Division (LQD) District III received responses to LQD first round completeness and technical review comments on November 19, 2015 for the Belle Ayr North Amendment Application.
>
> The attached memo contains your numbered Completeness and Technical review comments. Note that that the comments contained in your respective review memorandum were re-numbered and re-formatted for insertion into the May 6, 2015 consolidated review memorandum sent to Belle Ayr Mine.
>
> By statute, LQD has 30 days to review the Belle Ayr Mine responses and submit comment. I would like to compile and submit our consolidated responses to Belle Ayr Mine by Friday, December 18, 2015. I ask for your comments by Wednesday, December 16, 2015. If that date is not possible, please contact me as soon as

possible. Thank you.

Kurt

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Kurt King, LQD District III

CC: TFN 5 3/160

FROM: Matt Kunze, LQD Division Services

DATE: December 10, 2015

SUBJECT: Second Round Comments on Belle Ayr North Amendment Application (TFN 5 3/160)

Responses to first round comments on the Belle Ayr Mine North Amendment application (TFN 5 3/160) were received by the Cheyenne LQD on December 3, 2015. As requested by your November 20, 2015 memorandum, the following is a review of the responses to my first round comments on the application.

25. Volume 4, Section 2.6.1 Surface Water: Response accepted. (MDK)

29. Volume 5, Section 2.6.2 Groundwater: Response not accepted. Thank you for bringing the wells drilled in 1999 into the North Amendment application to provide baseline data for the amendment. However, there are some items that need to be addressed on the data from these wells:

(a) In Table 2.6.2-1, there are some errors on the northing and easting coordinates for wells LBA-6O, LBA-10C, and LBA-10O. The coordinates in Table 2.6.2-1 for these wells do not match those shown on Page 17 of the new Appendix 2.6.2-1. It appears that the coordinates on Page 17 of the new Appendix 2.6.2-1 are correct. Please correct the coordinates for the wells noted above in Table 2.6.2-1. (MDK)

(b) The LQD has an electronic copy of the water quality sampling data collected at the LBA wells from 1999 to 2001. However as shown in Attachment 4 of Appendix 2.6.2-1, the wells were also sampled in June and July 2015. Please provide the LQD Cheyenne office the water quality data for the 2015 sampling on CARF Attachment No. 10 – *New Field Water Quality Data* and CARF Attachment No. 11 – *New Lab Water Quality Data*. These data will be incorporated into the CHIA for the North Amendment. (MDK)

(c) The depth to aquifer data provided in Attachment 3 of Appendix 2.6.2-1 are from 1999 and therefore provide limited value for documenting current water levels at these wells given the drawdowns that may have been caused by CBM and coal mining in this area over the last 16 years. It also appears that only one water level measurement was recorded at these wells when they were initially completed.

Please also provide the current water level data for the eight LBA wells, assuming they were collected during the 2015 sampling. These should be added to Attachment

3 of Appendix 2.6.2-1 and also submitted to the LQD Cheyenne office on CARF Attachment No. 5 – *New Groundwater Level Data*. These data will be incorporated into the CHIA for the North Amendment. (MDK)

30. Volume 5, Section 2.6.2 Groundwater: Response accepted. (MDK)

41. Volume 7, Section 2.10 Wetlands Inventory: Response accepted. (MDK)

44. Volume 7, Section 2.11: Response accepted. (MDK)

71. Volume 11: Response not accepted. This comment is highlighted in yellow in the response letter but there was no response provided. Please provide the CAD file for Map 3.5-37, *Maximum Extent of Drawdown in Coal (Year 2030) With Predicted Impacts to Water Rights*. This file is needed to assist in preparing maps for the CHIA for the amendment. The file can be emailed to: matthew.kunze@wyo.gov. (MDK)

From:	Kurt King
To:	Matthew Kunze
Cc:	Muthu Kuchanur
Subject:	Re: Review Request for Review of First Round Responses for Belle Ayr North Amendment Application; Belle Ayr Mine Permit 214-T8, TFN 5 3/160
Date:	Thursday, December 10, 2015 1:25:45 PM

Great! Thank you very much Matt. We will keep this moving.

Kurt

On Thu, Dec 10, 2015 at 12:31 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Hi Kurt,
>
> Please find my attached review. There are still a few outstanding items that need addressed.
>
> As far as the CHIA, I had started to update it over the summer but have not gotten back to it for a while. Since we just completed the Caballo CHIA in the same area, it is mostly a matter of adding one more year of monitoring data from the four mines and updating all the maps for the Belle Ayr amendment. I have been pretty busy on the Brook Mine CHIA, but hope to get back to the Belle Ayr CHIA soon. Some of our outstanding comments on the amendment also will need addressed before we can finish the CHIA.
>
> Thanks, Matt
>
> ---
>
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 200 West 17th Street, Lower Level
> Cheyenne, WY 82002
> 307-777-7055
>
> On Fri, Nov 20, 2015 at 10:27 AM, Kurt King <kurt.king@wyo.gov> wrote:
>
>> Hell
>>
>> Hello All:
>>
>> Land Quality Division (LQD) District III received responses to LQD first round completeness and technical review comments on November 19, 2015 for the Belle Ayr North Amendment Application.
>>
>> The attached memo contains your numbered Completeness and Technical review comments. Note that that the comments contained in your respective review memorandum were re-numbered and re-formatted for insertion into the May 6, 2015 consolidated review memorandum sent to Belle Ayr Mine.

By statute, LQD has 30 days to review the Belle Ayr Mine responses and submit comment. I would like to compile and submit our consolidated responses to Belle Ayr Mine by Friday, December 18, 2015. I ask for your comments by Wednesday, December 16, 2015. If that date is not possible, please contact me as soon as possible. Thank you.

Kurt

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Kurt King
Cc:	Muthu Kuchanur
Subject:	Re: Review Request for Review of First Round Responses for Belle Ayr North Amendment Application; Belle Ayr Mine Permit 214-T8, TFN 5 3/160
Date:	Friday, December 11, 2015 9:28:24 AM
Attachments:	MDK_Second Round Comments on Belle Ayr North Amendment_TFN 5 3-160.docx

---

Kurt,

Please find my attached revised review memo. I have changed Comment 71 to accepted since Gretchen just emailed me the file today.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Thu, Dec 10, 2015 at 1:25 PM, Kurt King <kurt.king@wyo.gov> wrote:

> Great! Thank you very much Matt. We will keep this moving.
>
> Kurt
>
> On Thu, Dec 10, 2015 at 12:31 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Hi Kurt,
>>
>> Please find my attached review. There are still a few outstanding items that need addressed.
>>
>> As far as the CHIA, I had started to update it over the summer but have not gotten back to it for a while. Since we just completed the Caballo CHIA in the same area, it is mostly a matter of adding one more year of monitoring data from the four mines and updating all the maps for the Belle Ayr amendment. I have been pretty busy on the Brook Mine CHIA, but hope to get back to the Belle Ayr CHIA soon. Some of our outstanding comments on the amendment also will need addressed before we can finish the CHIA.
>>
>> Thanks, Matt
>>
>>
>>

307-777-7055

On Fri, Nov 20, 2015 at 10:27 AM, Kurt King <kurt.king@wyo.gov> wrote:

Hell

Hello All:

Land Quality Division (LQD) District III received responses to LQD first round completeness and technical review comments on November 19, 2015 for the Belle Ayr North Amendment Application.

The attached memo contains your numbered Completeness and Technical review comments. Note that that the comments contained in your respective review memorandum were re-numbered and re-formatted for insertion into the May 6, 2015 consolidated review memorandum sent to Belle Ayr Mine.

By statute, LQD has 30 days to review the Belle Ayr Mine responses and submit comment. I would like to compile and submit our consolidated responses to Belle Ayr Mine by Friday, December 18, 2015. I ask for your comments by Wednesday, December 16, 2015. If that date is not possible, please contact me as soon as possible. Thank you.

Kurt

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Kurt King, LQD District III

CC: TFN 5 3/160

FROM: Matt Kunze, LQD Division Services

DATE: December 11, 2015

SUBJECT: Second Round Comments on Belle Ayr North Amendment Application (TFN 5 3/160) **(REVISED)**

Responses to first round comments on the Belle Ayr Mine North Amendment application (TFN 5 3/160) were received by the Cheyenne LQD on December 3, 2015. As requested by your November 20, 2015 memorandum, the following is a review of the responses to my first round comments on the application.

25. Volume 4, Section 2.6.1 Surface Water: Response accepted. (MDK)

29. Volume 5, Section 2.6.2 Groundwater: Response not accepted. Thank you for bringing the wells drilled in 1999 into the North Amendment application to provide baseline data for the amendment. However, there are some items that need to be addressed on the data from these wells:

(a) In Table 2.6.2-1, there are some errors on the northing and easting coordinates for wells LBA-6O, LBA-10C, and LBA-10O. The coordinates in Table 2.6.2-1 for these wells do not match those shown on Page 17 of the new Appendix 2.6.2-1. It appears that the coordinates on Page 17 of the new Appendix 2.6.2-1 are correct. Please correct the coordinates for the wells noted above in Table 2.6.2-1. (MDK)

(b) The LQD has an electronic copy of the water quality sampling data collected at the LBA wells from 1999 to 2001. However as shown in Attachment 4 of Appendix 2.6.2-1, the wells were also sampled in June and July 2015. Please provide the LQD Cheyenne office the water quality data for the 2015 sampling on CARF Attachment No. 10 – *New Field Water Quality Data* and CARF Attachment No. 11 – *New Lab Water Quality Data*. These data will be incorporated into the CHIA for the North Amendment. (MDK)

(c) The depth to aquifer data provided in Attachment 3 of Appendix 2.6.2-1 are from 1999 and therefore provide limited value for documenting current water levels at these wells given the drawdowns that may have been caused by CBM and coal mining in this area over the last 16 years. It also appears that only one water level measurement was recorded at these wells when they were initially completed.

Please also provide the current water level data for the eight LBA wells, assuming they were collected during the 2015 sampling. These should be added to Attachment

3 of Appendix 2.6.2-1 and also submitted to the LQD Cheyenne office on CARF Attachment No. 5 – *New Groundwater Level Data*. These data will be incorporated into the CHIA for the North Amendment. (MDK)

30. Volume 5, Section 2.6.2 Groundwater: Response accepted. (MDK)

41. Volume 7, Section 2.10 Wetlands Inventory: Response accepted. (MDK)

44. Volume 7, Section 2.11: Response accepted. (MDK)

71. Volume 11: Response accepted. The file was not included in the original response package but I received the file via email from Gretchen Anderson on December 11, 2015. (MDK)

From:	Kurt King
To:	Matthew Kunze
Cc:	Muthu Kuchanur
Subject:	Re: Review Request for Review of First Round Responses for Belle Ayr North Amendment Application; Belle Ayr Mine Permit 214-T8, TFN 5 3/160
Date:	Friday, December 11, 2015 10:25:22 AM

Matt:

Thanks for the quick turnaround. I will insert the revised review memo in the TFN file.

Kurt

On Fri, Dec 11, 2015 at 9:28 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Kurt,
>
> Please find my attached revised review memo. I have changed Comment 71 to accepted since Gretchen just emailed me the file today.
>
> Matt
>
> ---
>
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 200 West 17th Street, Lower Level
> Cheyenne, WY 82002
> 307-777-7055
>
> On Thu, Dec 10, 2015 at 1:25 PM, Kurt King <kurt.king@wyo.gov> wrote:
>
>> Great! Thank you very much Matt. We will keep this moving.
>>
>> Kurt
>>
>> On Thu, Dec 10, 2015 at 12:31 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>>
>>> Hi Kurt,
>>>
>>> Please find my attached review. There are still a few outstanding items that need addressed.
>>>
>>> As far as the CHIA, I had started to update it over the summer but have not gotten back to it for a while. Since we just completed the Caballo CHIA in the same area, it is mostly a matter of adding one more year of monitoring data from the four mines and updating all the maps for the Belle Ayr amendment. I have been pretty busy on the Brook Mine CHIA, but hope to get back to the Belle Ayr CHIA soon. Some of our outstanding comments on the amendment also will need addressed before we can finish the CHIA.
>>>
>>> Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Fri, Nov 20, 2015 at 10:27 AM, Kurt King <kurt.king@wyo.gov> wrote:

Hell

Hello All:

Land Quality Division (LQD) District III received responses to LQD first round completeness and technical review comments on November 19, 2015 for the Belle Ayr North Amendment Application.

The attached memo contains your numbered Completeness and Technical review comments. Note that that the comments contained in your respective review memorandum were re-numbered and re-formatted for insertion into the May 6, 2015 consolidated review memorandum sent to Belle Ayr Mine.

By statute, LQD has 30 days to review the Belle Ayr Mine responses and submit comment. I would like to compile and submit our consolidated responses to Belle Ayr Mine by Friday, December 18, 2015. I ask for your comments by Wednesday, December 16, 2015. If that date is not possible, please contact me as soon as possible. Thank you.

Kurt

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: Muthu Kuchanur
Subject: Brook Mine GW Quality Stat Tables
Date: Friday, December 11, 2015 12:10:47 PM

Muthu,

I put the tables at:

F:\Division\LQD\Shared Area\MKunze\CHIA\CHIA 39_Brook Mine\GW_Support_Work\Baseline\Groundwater Quality Stat Tables.docx

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Muthu Kuchanur
To: Matthew Kunze
Subject: Re: Brook Mine GW Quality Stat Tables
Date: Friday, December 11, 2015 12:13:07 PM

Thanks Matt. I will incorporate them into the baseline document that I am working on.

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82001

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Fri, Dec 11, 2015 at 12:10 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Muthu,
>
> I put the tables at:
>
> F:\Division\LQD\Shared Area\MKunze\CHIA\CHIA 39_Brook Mine\GW_Support_Work\Baseline\Groundwater Quality Stat Tables.docx
>
> Matt
>
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 200 West 17th Street, Lower Level
> Cheyenne, WY 82002
> 307-777-7055
>
>
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.
>

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Hal Corbett
To:	andrew.kuhlmann@wyo.gov
Cc:	Trey Patterson
Subject:	Padlock Ranch Company/Ramaco - TFN6 2/025
Date:	Friday, December 11, 2015 3:34:24 PM

Andrew-

If you have the AG's office's comments on Round 3 of the comment process available, I would appreciate it if you could send a copy to me via email.

Thanks.

Hal

Haultain E. Corbett
Lonabaugh and Riggs, LLP
P.O. Drawer 5059
50 E. Loucks Street, Suite 110
Sheridan, WY 82801
Phone: (307) 672-7444
Fax: (307) 672-2230
Hal@Lonabaugh.com

CONFIDENTIALITY NOTICE: This e-mail is intended only for the person to whom it is addressed and may contain information that is privileged or confidential. Distribution of this e-mail or the information in it by anyone other than the intended recipient is prohibited. If you have received this e-mail in error, please advise the sender and delete the e-mail from your computer. Thank you.

From:	Hal Corbett
To:	andrew.kuhlmann@wyo.gov
Cc:	Trey Patterson; John Heyneman
Subject:	Padlock Ranch Company - Ramaco Permit Application
Date:	Monday, December 14, 2015 3:48:09 PM
Attachments:	20151214_152329_0730.pdf

Andrew-

Please see the attached letter addressing Ramaco's mine permit application No. TFN 2/025 on behalf of my client, Padlock Ranch Company, which is a surface owner within the mine permit area. The hard copy is being sent to you via US mail.

If you have any questions, please let me know.

Hal

Haultain E. Corbett
Lonabaugh and Riggs, LLP
P.O. Drawer 5059
50 E. Loucks Street, Suite 110
Sheridan, WY 82801
Phone: (307) 672-7444
Fax: (307) 672-2230
Hal@Lonabaugh.com

CONFIDENTIALITY NOTICE: This e-mail is intended only for the person to whom it is addressed and may contain information that is privileged or confidential. Distribution of this e-mail or the information in it by anyone other than the intended recipient is prohibited. If you have received this e-mail in error, please advise the sender and delete the e-mail from your computer. Thank you.

LAW OFFICES
LONABAUGH AND RIGGS, LLP
SUITE 110, 50 EAST LOUCKS STREET
DRAWER 5059
SHERIDAN, WYOMING 82801

DAN B. RIGGS
JEFFREY J. GONDA
ROBERT G. BERGER
HAULTAIN E. CORBETT
DAVID C. SMITH*
MISTEE L. ELLIOTT
AMANDA K. ROBERTS**

MOLLY R. HOON-HANKS*
J. KYLE HENDRICKSON

* ADMITTED IN COLORADO
**ADMITTED IN MONTANA

TELEPHONE (307) 672-7444
FAX (307) 672-2230
E-MAIL: Lawyers@Lonabaugh.com

E.E. LONABAUGH
(1861-1938)

A.W. LONABAUGH
(1896-1971)

MICHAEL C. STEEL
(1974-2008)

E. E. LONABAUGH
(1923-2012)

December 14, 2015

Via U.S. Mail and E-mail
andrew.kuhlmann@wyo.gov

Andrew Kuhlmann
Wyoming Attorney General's Office
123 Capital Building
Cheyenne, WY 82002

Re: Padlock Ranch Company
Ramaco / Brook Mining Company
Coal Mine Permit Application
TFN6 2/025
Sheridan County, Wyoming

Dear Andrew:

As we discussed on the telephone, this office represents Padlock Ranch Company ("Padlock") which owns approximately 1,400 acres of land within the Phase I mine permit area for the coal mine proposed by Ramaco and Brook Mining Company, LLC ("Ramaco").

At our client's request, we have been following the mine permit application process, to the extent we can do so based on the extremely limited information provided to Padlock by Ramaco.

However, because Round 3 of the Wyoming Department of Environmental Quality's review and comments reviewed by us makes no mention of the fact that Padlock has not provided surface owner consent to mining as required by the Wyoming Environmental Quality Act, we thought it appropriate to offer you Padlock's view of the current situation.

Accordingly, please note the following:

- Padlock owns approximately 1,400 acres of deeded land within the mining permit area for Phase I of the Ramaco Mine. Although some of the maps provided to the DEQ by Ramaco erroneously show these lands as being owned by Ramaco, and Ramaco has subsequently claimed in comments to DEQ that Padlock is not a surface owner, Ramaco is incorrect; the lands are owned in fee by Padlock, subject to a mineral reservation currently held by Ramaco.

- Padlock was first provided with maps of Ramaco's proposed mine permit area in late 2012. At that time Ramaco provided Padlock with a proposed Surface Access Agreement covering over 6,000 acres of Padlock land. Ramaco asked for Padlock's surface owner consent to mining. Padlock declined because it had not seen a mine plan or a reclamation plan.

- In the spring of 2013, Ramaco provided Padlock with several binders containing draft mining and reclamation plans. Those plans were different from the maps provided to Padlock in late 2012.

- During the summer of 2013, Ramaco went ahead with surveying and core drilling on Padlock's lands without first obtaining Padlock's consent and without compensating Padlock therefor.

- In August 2014, Ramaco provided Padlock with a new set of maps showing a different mine plan. Since then, it is Padlock's understanding that the permit area and mine plan have been extensively revised.

- In September, 2014, Padlock tendered a revised form of Surface Access Agreement to Ramaco. Unlike the form of agreement proposed by Ramaco, Padlock's draft agreement would have provided economic compensation to Padlock to cover losses of grazing land and a breach of Padlock's water system. It was proposed to Ramaco that annual payments would be 100% recoupable from the coal royalty they initially proposed. In an attempt to negotiate, Padlock representatives later verbally stated that Padlock would consider delaying any payment until the time mine disturbance commenced.

Thereafter, Ramaco consistently and continuously refused to negotiate any of the terms of the Surface Access Agreement with Padlock.

- An updated mine area and haul road map was shown to Padlock in February 2015, but Ramaco was unwilling to provide a copy of the map to Padlock. Ramaco has not kept Padlock updated on its changes to the mine plan.

- The Padlock lands include a buried waterline system which provides water to Padlock's livestock. Ramaco's engineer was advised of the location of this stock water system in March, 2015. Padlock advised that Ramaco's proposed mining operations would interfere with the waterline. Since then, Padlock has received nothing from Ramaco with respect to protecting or replacing this stock water system as required by W.S. §35-11-415 (b)(xii).

- To date, Ramaco has failed to protect the interests of Padlock, as surface owner, and it has not provided or offered to provide a bond to secure the payment for any damages to the surface estate as required by W.S. §35-11-416(a).

- To date, Ramaco has not provided Padlock with a current mine plan or a current reclamation plan as required by W.S. §35-11-406 (b)(xi) or (xii).

- To date, Padlock has not granted surface owner consent to mining as required by W.S. §35-11-406(b)(xi) or (xii).

We are aware that Ramaco has taken the position that it is not required to obtain surface owner consent to mining from Padlock which is mandated by the Wyoming Environmental Quality Act because of a mineral reservation contained in a 1954 deed to Padlock's predecessor in title. Ramaco cites the case of *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986), for this position. Ramaco's reliance on *WYMO Fuels* case is misplaced. In that case, two surface owners whose lands had been condemned for a haul road and a railroad spur claimed that they were surface owners from whom surface owner consent to mining was required, notwithstanding the fact that all of their surface rights

within the mine permit area had been condemned by the mining company. The Supreme Court held that the two parties whose lands had been condemned were not surface owners after the condemnation judgment and "were left with no interest which required protection pursuant to the Wyoming Environmental Quality Act." *Id.* at 1236. The situation here is completely different; Padlock is the fee owner of 1,400 acres of surface estate which has not been condemned and which is therefore entitled to protection to the Wyoming Environmental Quality Act.

Padlock, as owner of surface estate, is clearly a "surface owner" within the meaning of the Environmental Quality Act because if owns fee title to the surface of the lands in question. *Belle Fourche Pipeline Co. v. State*, 766 P.2d 537, 543 (Wyo. 1988).

Wyoming statute §35-11-406(b)(xi) and (xii) both require an "instrument of consent" from the surface owner that grants the applicant permission to enter and commence surface mining operations and that includes approval of the applicant's mining plan and reclamation plan. The mineral reservation in the 1954 deed provides neither surface owner consent to mining as contemplated by the Wyoming Environmental Quality Act, nor approval of a mining plan or a reclamation plan.

The 1954 deed relied upon by Ramaco is an instrument of conveyance, because it conveyed fee title to the surface of lands now owned by Padlock (and by Big Horn Coal Company). It is notable that the federal counterpart to Wyoming's Environmental Quality Act, the Surface Mining Control and Reclamation Act of 1977 ("SMCRA") expressly included a "conveyance" as a type of document that may provide for surface owner consent, *see*; 30 U.S.C. 1260(b)(6)(B); *Belle Fourche Pipeline Company v. State*, *supra* at 548. However, Wyoming's Environmental Quality Act does not include a "conveyance" as a specific type of "instrument of consent". This omission must be considered an intentional act by the legislature, and courts will not read words into a statute when the legislature has chosen not to include them. *Morris v. CMS Oil and Gas Co.*, 227 P.2d 325, 333 (Wyo. 2010). Under Wyoming law, an instrument of conveyance cannot be considered an instrument of consent to mining.

Further, Ramaco's mining plans and reclamation plans were developed almost 60 years after the execution of the 1954 deed. There is no conceivable way that the reservation in the 1954 deed can be construed as approval of Ramaco's mining plan or reclamation plan.

The Wyoming Supreme Court has recognized the need for liberal construction of environmental statutes; "Environmental protection statutes have as their goal public protection; they are entitled to a liberal construction. When faced with claims under the Environmental Quality Act, courts of this state must all times be ready and willing to afford such remedies as are within the law." *People v. Platte Pipe Line Company*, 649 P.2d 208, 212 (Wyo. 1982) (Internal citations omitted).

At the time the 1954 deed was executed, common law provided virtually no protection for surface owners. The mineral estate was wholly dominant over the surface estate - no damages were payable as long as the mineral owner's use of the surface was reasonable and the mineral owner did not operate negligently or engage in willful misconduct. *Belle Fourche Pipeline Company v. State*, *supra* at 544. There were no state or federal laws requiring reclamation of coal mines in 1954, nor were mining companies in the practice of voluntarily reclaiming their land. During the 1960s and 70s, however, state and federal governments responded to increase surface mining by enacting new laws to protect both the environment and surface owners. *Id.* The movement towards new legislation was based largely on the fact that mining companies had failed to reclaim or restore the surface after extracting minerals, leaving "once productive agricultural and grazing lands ...destroyed by mining activities." *Id.* 546. Wyoming enacted its Environmental Quality Act in 1973, and amended the Act in 1975. The Act provides specific protection and consent requirements for surface owners.

The 1954 deed predated the Wyoming Environmental Quality Act by 20 years. Allowing that deed to serve as consent to mining and reclamation under the Wyoming Environmental Quality Act would be contrary to the legislature's goal to protect surface owners as imposed by the Wyoming Environmental Quality Act. *See, Universal Equipment Company v. State*, 839 P.2d 967, 973 (Wyo. 1972) (imposing post-Environmental Quality Act bond requirements on pre-existing operations was appropriate in order to ensure reclamation of the mine lands).

Ramaco's argument that the reservation in the 1954 deed obviates the need for Ramaco to obtain surface owner consent to mining and approval of Ramaco's mine plan and reclamation plan from Padlock has no merit.

Thank you for your attention to this matter, and please keep this office advised as to developments in this matter, and thanks.

Very truly yours,

LONABAUGH AND RIGGS, LLP

By: Haultain E. Corbett

HEC/rlb
cc: Padlock Ranch Company

From:	Shannon Anderson
To:	kyle.wendtland@wyo.gov; sanderson@powderriverbasin.org
Cc:	Mark Rogaczewski; Bj Kristiansen; andrew kuhlmann
Subject:	Concerns regarding Ramaco permit
Date:	Tuesday, December 15, 2015 3:38:09 PM
Attachments:	2015 12-15 ltr to DEQ re Ramaco permit.pdf

Dear Kyle,

Please see the attached letter regarding the Ramaco coal mine permit. We look forward to your and your staff's response.

Thank you,
Shannon

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

ENCOURAGING RESPONSIBLE DEVELOPMENT TODAY ~ FOR TOMORROW

934 N. MAIN ST. SHERIDAN, WY 82801 (307) 672-5809 FAX (307) 672-5800
INFO@POWDERRIVERBASIN.ORG WWW.POWDERRIVERBASIN.ORG

POWDER RIVER BASIN
Resource Council

Via electronic and first-class mail

Kyle Wendtland, Administrator
Wyoming Department of Environmental Quality
Land Quality Division
200 West 17th Street, Garden Level
Cheyenne, WY 82002
kyle.wendtland@wyo.gov

December 15, 2015

Dear Mr. Wendtland,

We are writing to follow-up on concerns we have about the Brook Mine permit application submitted by Brook Mining Company, LLC, a wholly owned subsidiary of Ramaco, LLC. We ask that DEQ consider our concerns and respond to us, in writing, regarding our questions and what the agency's course of action will be in response.

In March, we wrote to DEQ with the following concern:

> First, it seems unlikely that Ramaco will actually be the operator of the Brook Mine. Based on information publicly available on the company's website and from what we have heard about the company from landowners and other parties, it does not appear that the company has the staff and expertise capable of operating a coal mine. DEQ regulations require "complete identification" of "[t]he names, addresses and telephone numbers of any operators, if different from the applicant." Land Quality Rules & Regulations (hereafter "LQRR") Ch. 2 § 2(a)(i). Upon our review of the application, Ramaco did not identify who the operator of the coal mine would be. Please verify that Ramaco will indeed be the operator of the proposed mine and if so, that they have the necessary staff and expertise to in fact operate the mine. If an additional operator is proposed, please require Ramaco to identify that operator in its permit to mine.

Based on our continued review of the permit application and supplemental information provided in response to DEQ's technical review questions, it does not seem this issue has been addressed. It is our understanding that while Ramaco has a local "office," the company does not actually have staff that would be able to carry out mining activities should the company receive a permit. We therefore renew our concerns that the Ramaco permit application is not complete and the company must disclose who the operator of the coal mine will be.

Thank your for your attention to our concerns. We look forward to your response.

Sincerely,

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St.
Sheridan, WY 82801
(307) 672-5809
sanderson@powderriverbasin.org

From:	Lynne Boomgaarden
To:	andrew kuhlmann (andrew.kuhlmann@wyo.gov)
Subject:	Letter from Big Horn Coal Company
Date:	Wednesday, December 16, 2015 12:58:44 PM
Attachments:	BHC Letter to A. Kuhlmann 121615.PDF image001.jpg

---

Andrew –
Please review the attached letter I am sending on behalf of Big Horn Coal Company with regard to recent communications from Ramaco to you and DEQ/LQD. A hard copy will follow by regular mail. I would be pleased to discuss this further or answer any questions you may have.
Best regards and Happy Holidays,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

CROWLEY | FLECK PLLP
ATTORNEYS

Lynne Boomgaarden
237 Storey Boulevard, Ste. 110
Cheyenne, WY 82009
Office: 307-426-4100
Direct: 307-426-4104
Cell: 307-631-1070
lboomgaarden@crowleyfleck.com

December 16, 2015

Mr. Andrew Kuhlman
Senior Assistant Attorney General
Kendrick Building
2320 Capitol Avenue
Cheyenne, WY 82002
andrew.kuhlmann@wyo.gov

Via Electronic and U.S. Mail

Re: Continued Concerns Regarding Lack of Surface Owner Consent and other Representations Related to the Brook Mining Mine Permit Application

Dear Mr. Kuhlmann:

As you are aware from prior communications, my client, Big Horn Coal Company ("BHC"), did not consent to the mine plan and reclamation plan that Brook Mining/Ramaco (collectively, "Ramaco") provided to BHC for review because the proposed activities will unreasonably interfere with BHC's extensive surface infrastructure improvements and its existing use and development plans for the area, including but not limited to the exercise of BHC's rights and obligations under its ***existing*** Mine Permit No. 213-T8. BHC documented its legal and operational concerns with the Ramaco mine plan, reclamation plan, permit application adjudication and exploratory drilling activity in a letter dated March 6, 2015, to Mr. Alan Edwards and copied to you.

BHC recently became aware of certain assertions made by Ramaco to the Wyoming Attorney General and the Department of Environmental Quality Land Quality Division ("DEQ/LQD") in a letter to you from Mr. Tom Sansonetti dated October 13, 2015, and in Ramaco's Round 2 permit review responses.

Accordingly, today's letter is being provided for the purpose of reaffirming BHC's concerns and position regarding the necessity of obtaining the surface owner's consent to mining as required by the Wyoming Environmental Quality Act ("WEQA").

First, notwithstanding Mr. Sansonetti's assertion on behalf of Ramaco that "[t]he 1983 release agreement does not affect any of the rights reserved in the 1954 Deed," and "[t]he 1954 Deed controls the surface use mining rights of Ramaco relative to both Big Horn Coal and Padlock Ranch," the Wyoming district court denied Ramaco's and BHC's competing motions for summary judgment as to those assertions by an order dated September 21, 2015. This matter remains the subject of active litigation before the Fourth Judicial District Court for Sheridan County, Wyoming, in *Brook Mining Company, LLC v. Big Horn Coal Company,* Civil Action No. CV 2014-372. As of this date, no formal discovery plans have been made and no trial date has been set. BHC continues to ardently dispute Ramaco's assertion that it has the right under the 1954 deed to use BHC's surface lands to conduct all "necessary or convenient" coal mining activities and that the Ramaco Mine Plan application contains permitted uses of the surface under the 1954 Deed.

Second, as outlined in our March 6, 2015 letter to Mr. Edwards, BHC's surface owner rights under W.S. 35-11-406(b)(xii) are independent of any interpretation or operation of the 1954 deed because ***nothing*** in the WEQA permits a mine permit applicant to utilize a deed, with a general reservation of surface rights, to strip a surface owner under W.S. 35-11-406(b)(xii) of its rights to *review* a compliant mine and reclamation plan and to *refuse to consent* to such plan, or to *exempt* a mine permit applicant from its obligation to petition the Environmental Quality Council ("EQC") and provide sufficient evidence upon which the EQC can make the findings necessary under W.S. 35-11-406(b)(xii)(A)-(E) to support an order in lieu of consent. Ramaco erroneously relies on *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986) to dispute this fact (see Adjudication, Response AG 1-Round 1). The Supreme Court in *WYMO Fuels* addressed the narrow issue of "whether condemnation of a way of necessity for a railroad spur track and a mine truck haul road … dispenses with the statutory requirement that a resident or agricultural landowner or a surface landowner consent to mining operations." *Id.* at 1231. In answer to this narrow question, the Supreme Court "afford[ed] efficacy to the condemnation statute," by holding that two parties whose lands had been condemned were no longer surface owners and accordingly, "were left with no interest which required protection pursuant to the Wyoming Environmental Quality Act." *Id.* at 1236. The *WYMO Fuels* decision has no application here. BHC's fee surface interests have not been condemned and neither Ramaco nor DEQ/LQD may ignore BHC's surface consent rights under the WEQA.

For these reasons, BHC respectfully renews its request that DEQ/LQD expressly acknowledge BHC's right, pursuant to W.S. 35-11-406(b)(xii), to review and consent to any mine plan and reclamation plan that Ramaco submits to DEQ/LQD for consideration. Absent BHC's consent to a compliant mining plan and reclamation plan, BHC requests that DEQ/LQD require Ramaco to petition to the EQC for an order in lieu of consent.

Finally, Ramaco has failed to provide BHC (either directly or through its court filings) any mine and reclamation plans it has submitted to DEQ/LQD for review. To the best of BHC's knowledge, Ramaco still has not outlined the respective operations of Ramaco and BHC within the overlapping permit area. Moreover, Ramaco's mine plans as represented to the court appear to differ substantially from its filings with DEQ/LQD. As previously stated, these varied representations of Ramaco's plans stand in direct contrast to the cooperation and agreement contemplated by DEQ/LQD SOP 2.1 and undermine any credible foundation upon which Ramaco's permit application might succeed.

Thank you for your consideration of BHC's concerns. Please contact me if you have questions or would like to discuss this matter further.

Sincerely,

Lynne Boomgaarden

Lynne Boomgaarden
Crowley Fleck, PLLP

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Jeff Barron
To:	BJ Kristiansen
Subject:	RE: Brook Mine Round 3 responses, TFN 6 2/025
Date:	Friday, December 18, 2015 8:13:06 AM
Attachments:	Compiled Round 3 Comment Responses.docx Brook_Mine_Change_Index_December_2015.docx image001.jpg

---

BJ,

Find attached the compiled responses and index of change

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Friday, December 18, 2015 8:12 AM
To: Jeff Barron
Subject: Brook Mine Round 3 responses, TFN 6 2/025

Jeff,

I can't find the response sheets in the electronic materials you left here the other day. Could I get an electronic copy of the response sheets so I can do comparisons without having to visit the library every time I need to work with the files?

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Contents

Adjudication 2
Appendix D1 5
Appendix D2 7
Appendix D3 7
Appendix D4 8
Appendix D5 9
Appendix D6 27
Appendix D7 60
Appendix D8 64
Appendix D9 69
Appendix D10 70
Appendix D11 72
Mine Plan 89
Reclamation Plan 203
Other Comments 235

Adjudication

Comment AG 1 – Round 1

Please also provide copies of the complaint and the answer. If there are any motions that the court has ruled on limiting or deciding any of the claims or factual or legal questions originally at issue in the case, please also provide copies of the orders, the motions, the responses to the motions, and any supporting memoranda.

Response AG 1 – Round 1

The Applicant's position with regard to any surface interests that may be claimed by Padlock Ranch Company and/or Big Horn Coal Company is that the Applicant alone owns the sole dominant present property right to use these surface lands for the coal mining operation described in the application, as that application has been submitted and supplemented. Applicant's sole dominant surface ownership and use interest in the relevant lands derives directly from the 1954 Deed (Attachment B) and its express reservation language. Pursuant to the controlling Wyoming Supreme Court authority set out in *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986) (Attachment C), when the Applicant already owns the dominant surface use rights for coal mining on the property, then the Applicant consents to its own use pursuant to its application by submitting the application and no other surface consents can or should be required under W.S. § 35-11-406(b)(xi). As the Land Quality Division is aware, to the extent that Padlock Ranch Company incorrectly claims some surface rights on any lands described in the 1954 Deed, it necessarily could only attempt to do so fully subject to the Applicant's sole dominant surface rights to mine coal. Under the WYOMO Fuels, Inc. decision, no consent from Padlock can be required. To the extent that Big Horn Coal incorrectly claims some surface use right in this area at this time, the Applicant is proceeding with quiet title litigation (Fourth Judicial District Court, Sheridan County, Wyoming Civil No. CV 2014-372) against Big Horn Coal on this issue and has asserted its sole dominant reserved surface right to use the surface described in the 1954 Deed to mine coal there without any consent from Big Horn Coal pursuant to the WYMO Fuels, Inc. case decision. Accurate copies of the Applicant's pending summary judgment motion arguments on this issue are enclosed with this response (attachment D and E). The Applicant can and will supplement these pleadings with further documentation that is described in the pleadings upon request.

Comment AG 1 – Round 2

Please provide copies of the following documents related to the state district court litigation between the Applicant/Ramaco and Big Horn Coal Company:

- The complaint and answer filed in the case (if either has been amended, only the most recent amended version needs to be provided).

- For the Applicant's summary judgment motion: Big Horn Coal's response to the motion.
- For Big Horn Coal's motion for summary judgment: the memo supporting that motion, the Applicant's response to the motion, and Big Horn Coal's reply memorandum.
- The "Section 5" of the "May 6, 1983, Release Agreement" that the Applicant mentioned in its reply in support of its summary judgment motion.
- When it is available, the district court's order deciding the Applicant's and Big Horn Coal's summary judgment motions.

Response AG 1 – Round 2

The materials requested in this comment were supplied to the Attorney General on August 20, 2015 after the Round 2 comments had been released. It is assumed if any further comment is required, it will be received in Round 3.

Comment AG 2 – Round 1

Therefore, the Division requests the Applicant to provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch Company and Big Horn Coal Company are or are not "residential or agricultural landowners" under the statutory definition in W.S. § 35-11-406(b)(xi).

Response AG 2 – Round 1

Please see response AG 1.

Comment AG 2 – Round 2

Please also provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch or Big Horn Coal qualify as a "resident or agricultural landowner," as defined in W.S. § 35-11-406(b)(xi). The statutory requirements for a permit application differ depending on whether that status exists, and the Division must determine which set of requirements (W.S. § 35-11-406(b)(xi) or -406(b)(xii)) may apply to this Application.

Response AG 2 – Round 2

The materials requested in this comment were supplied to the Attorney General on August 20, 2015 after the Round 2 comments had been released. It is assumed if any further comment is required, it will be received in Round 3.

Comment AG 3 – Round 2 (New Comment)

Would the 1983 release agreement apply to the surface rights that originate with the1954 Deed and are currently owned by Padlock Ranch? Did Padlock Ranch obtain its rights at issue before or after the 1980 release agreement?

Response AG 3 – Round 2 (New Comment)

No. The 1983 release agreement does not affect any of the rights reserved in the 1954 Deed. The 1954 Deed controls the surface use mining rights of Ramaco relative to both Big Horn Coal and Padlock Ranch. Even if the release agreement had an effect as to Big Horn, Padlock Ranch is not a party to the release agreement and as a non-party has no rights under that agreement. Ramaco has found no documents that might show Padlock Ranch acquired any kind of interest or rights under the 1983 release agreement.

Instead, Ramaco has found documents that show Padlock Ranch acquired certain lands from Big Horn Coal in 1965, almost 20 years **before** the release agreement. Padlock then sold some of the land back to Big Horn Coal and vice versa. But none of the documents showing these transfers mention the 1983 release agreement.

Comment AG 4 – Round 2 (New Comment)

If one assumes that Big Horn's arguments in the litigation are correct that the 1983 release agreement granted Big Horn rights greater than those under the 1954 Deed, would Big Horn's arguments and the rights it argues that it obtained through the release agreement also apply to any of Padlock Ranch's lands?

Response AG 4 – Round 2 (New Comment)

No. As discussed in response to the previous question, Padlock Ranch does not have any rights under the release agreement. Likewise, Ramaco could find no documents showing that Padlock Ranch ever acquired any rights in the 1983 release agreement.

Comment AG 5 – Round 2 (New Comment)

Are there any contractual documents or property records related to Padlock Ranch's lands that arguably may have altered Padlock Ranch's rights under the 1954 Deed? If so, please provide copies of those documents and explain the nature of the documents and how they may have affected Padlock Ranch's rights.

Response AG 5 – Round 2 (New Comment)

No. Ramaco has found several deeds purporting to convey land from Big Horn Coal to Padlock Ranch's predecessor. These deeds, however, do not alter or try to alter any rights under the 1954 Deed.

Comment BJ 68 – Round 3 (New Comment)

The Certificate of Liability Insurance appears to have expired on October 14, 2015. Please generate a new Certificate of Liability Insurance to cover the present period.

Response BJ 68 – Round 3 (New Comment)

A new Certificate of Liability Insurance covering the present period has been provided in this response package.

Comment DM 1 – Round 1

Adjudication – Appendix B2 – Groundwater Rights – There is a groundwater well that is missing in this volume. The listing is as follows:

Barbula #2

Permit No. 85631W

Location: SW NW Section 21, T57N R84W

Please add this entry to the table and to any corresponding maps.

Response DM 1 – Round 1

Adjudication text page WR-12 has been updated to include Barbula # 2 (P85631W) as well as Adjudication Exhibits 5 & 8.

Comment DM 1 – Round 2

No comment received.

Response DM 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 120 – Round 3 (New Comment)

Adjudication-Form 1. The index change sheet states that the affected area boundary was updated on several Exhibits. Has the affected area acreage changed? If so a new Form 1 will need submitted to show the correct affected area acreage. (MDK)

Response MK 120 – Round 3 (New Comment)

A new Form 1 has been provided with the revised affected acreage in this response package.

Appendix D1

Comment BJ 1 – Round 1

Appendix D1, Land Use, Table D1. 3-1; It is unnecessary to list the Expired Permit category of gas well permits. Since these APDs have expired without completion there is no related activity to the site. Listing of a non-event is not required. This also

applies to the NO category since this indicates that the APD was refused, thus never became permitted through WOGCC.

Response BJ 1 – Round 1

Revised Table D1.3-1 as requested.

Comment BJ 1 – Round 2

No comment received.

Response BJ 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 1 – Round 1

Appendix D-1. Exhibit D1.1-1. The landuses defined in Chapter 1 should be used on this Exhibit. Not the entire Brook Mine Permit falls neatly into these definitions so the following comments provide guidance:

a) The railroad, primary roads, oil and gas wells, and the facilities for Taylor Quarry would be considered Industrial commercial and may be shown with the vertical line stippling. The rest of the vertical stippling should be removed.

b) The 4.5 acres of Agricultural lands would have the Land use of Cropland. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no changes are needed to the map for this land use.

c) The 12.8 acres of water might be listed under multiple landuses such as Grazingland, Fish and Wildlife habitat or Recreational. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no change is needed to the map for this land use.

d) The 4,421.8 acres remaining should be shown as Grazingland and Fish and Wildlife habitat. The legend on the map should have Fish and Wildlife Habitat added to Past and Present Grazingland landuse. The stippled area on the map will stay the same.

e) No changes are needed to the areas identified as Recreational.

Response SP 1 – Round 1

Revised Exhibit D1.1-1 as requested.

Comment SP 1 – Round 2

No comment received.

Response SP 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 1 – Round 3

The response is satisfactory. Exhibit D1.1-1 has been revised to match the landuse definitions.

Comment SP 2 – Round 1

Appendix D-1. Text that refers to the areas mined as Industrial commercial should be revised to remove the mining. A reference to Section 1.6 on historic mining can be made in Section D1.3.1. Grazingland. The reclaimed mined lands are now being used as Grazingland. The difference between the mined and never been mined is defined as the vegetation community that is called Reclaimed. Section D1.6 discusses the historic mining of the area and the discussion on coal mining in Industrial commercial (D1.4.3) can be removed.

Response SP 2 – Round 1

Revised text as requested.

Comment SP 2 – Round 2

No comment received.

Response SP 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 2 – Round 3

The response is satisfactory. The text has been revised to identify the reclaimed land as Grazingland.

Appendix D2

Comment BJ 2 – Round 1

Appendix D2, History, There are no comments for this section of the application. The narrative is well written and comprehensive.

Response BJ 2 – Round 1

No response is necessary.

Appendix D3

No comments were received regarding Appendix D3.

Appendix D4

Comment BJ 3 – Round 1

Appendix D4, Climatology, General comment – Is there no data for climatology that is more recent than 1990? It exists, therefore needs to be represented. Please locate and include the most recent climatological data. Twenty year-old data bears little resemblance to Sheridan County climate today so characterization of the present climate with a 20 year gap is problematic. Please reevaluate the data in light of locating and use more recent information.

Response BJ 3 – Round 1

Revised wind, relative humidity, and degree day data to reflect period between 1990 and 2013. Note, as can be observed by updated data, little change occurred in averages reported for wind, relative humidity, and degree days. Therefore, the wind rose provided in Figure D4.2-6 is deemed to still be representative of the Sheridan area. Revised Figure D4.2-1, Figure D4.2-11, Table D4.1-1, Table D4.2-2, Table D4.2-3, and Table D4.2-7 in response to this comment.

Comment BJ 3 – Round 2

No comment received.

Response BJ 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 4 – Round 1

Appendix D4, Climatology, Section D4.2.6, Why was 65°F used as the baseline temperature? Also, why were the high and low temperatures set to 86°F and 50°F respectively? Please clarify.

Response BJ 4 – Round 1

Revised text to clarify the choice of high and low temperatures.

Comment BJ 4 – Round 2

No comment received.

Response BJ 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 5 – Round 1

Appendix D4, Climatology, Figure 4.2-11, Are the degree days the total number of days that match the data points for the entire period from 1961 through 1990? This

indicates that the data represented along the Y axis covers a period of 30 years on a daily basis. Please clarify.

Response BJ 5 – Round 1

Revised text with definitions of heating, cooling, and growing degree days to clarify Figure 4.2-11. Degree days are essentially a unit of measure like temperature, velocity, etc. A degree day signifies the number of degrees per day to heat or cool to a specified base temperature (most commonly 65°F). Each degree day is summed over the course of a month to estimate the total number of degree days that month. For example, July may have 0 heating degree days because all days are over 65°F, but will have cooling degree days nearly every day of the month. Figure 4.2-11 shows the average monthly degree days over the specified periods of data.

Comment BJ 5 – Round 2

No comment received.

Response BJ 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Appendix D5

Comment BJ 6 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Section D5.4.1, Paragraph 2 refers to "marginally suitable Selenium levels" as defined in LQD Guideline No.1. Guideline 1 has two separate sets of chemical quality criteria tables. Appendix 1 occurs on pages 17-21 as well as on pages 38-43. The first set of tables have been superseded by the second set of tables. Please use the tables on pages 38-43 when determining material suitability. The first Appendix 1 is being removed from the guideline.

The newer tables define the Selenium target as follows:

Suitable < 0.3 ppm

Marginal 0.3 – 0.8 ppm

Unsuitable > 0.8 ppm (dependent on premining water quality and overburden quality)

These values are established for uplands and ephemeral drainages unless it can be shown that Selenium impregnated materials will be buried above the groundwater potentiometric surface and below the reclaimed surface root zone. Other quality criteria have not changed.

Response BJ 6 – Round 1

Revised text as requested to reflect the revised LQD Appendix 1.

Comment BJ 6 – Round 2

No comment received.

Response BJ 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 7 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Figure D5.3-2, What units are expressed in the figure as the %g? Please include a footnote clarifying the measurement parameter.

Response BJ 7 – Round 1

Updated Figure D5.3-2 as requested.

Comment BJ 7 – Round 2

No comment received.

Response BJ 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 8 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-1, Are the Northings and Eastings in State Plane coordinates? It is assumed that they are but please verify this. The title at the top of the page could read Drill Hole Tabulations (State Plane Coordinates)

Response BJ 8 – Round 1

Updated as requested.

Comment BJ 8 – Round 2

No comment received.

Response BJ 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 9 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-2, Please rearrange the Lithologic and Electric logs in such a way that the Electric log immediately follows the Lithologic log. This allows for a more comprehensive examination of the data.

Response BJ 9 – Round 1

Rearranged logs as requested.

Comment BJ 9 – Round 2

No comment received.

Response BJ 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 10 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Holes R12-000 through R12-020 have the Northings and Eastings reversed. Please correct.

Response BJ 10 – Round 1

Updated as requested.

Comment BJ 10 – Round 2

No comment received.

Response BJ 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 11 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, The Lithologic logs with the AMBRE designation 02, 03, and 04 do not have coordinates or elevations. Please provide coordinates and elevations for these three holes.

Response BJ 11 – Round 1

Updated as requested.

Comment BJ 11 – Round 2

No comment received.

Response BJ 11 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 12 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Hole R13-018 appears to have erroneous coordinates. The Northing is listed as 11,941,802. It should probably be 1,941,802. The elevation is shown as 43,887.9, where it should probably be closer to 3,887.9. Please verify and correct.

Hole R13-024 has a very high Northing at 61,941,541 and elevation at 73,885.4. These may be 1,941,541 and 3,885.4, respectively. Please verify and correct

Response BJ 12 – Round 1

Updated as requested.

Comment BJ 12 – Round 2

No comment received.

Response BJ 12 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 13 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, A suggestion for future exploration: Ask the geophysical logger to reduce the gain on the gamma logs. The readjustment bounce on the logs makes them a bit difficult to read and interpret.

Response BJ 13 – Round 1

No response required.

Comment BJ 13 – Round 2

No comment received.

Response BJ 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 14 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-5, Pg. D5-5-4, The splitting tensile strength tests were run on four (4) samples from two (2) holes representing roof, coal, and floor conditions.

a) Why were these locations used as representative of the lithologies encountered during mining?

b) Are these few samples representative of all conditions expected to be encountered by the continuous miner (CM)?

Please elaborate and clarify the narrative. A statement must be made that strength testing will be performed on at least one set of samples per mining panel prior to use of the CM to insure that conditions are favorable for roof retention without subsidence. Lithology in this area is inconsistent and rock strength can vary accordingly. Using the data provided on the four samples tested indicates that some of the overburden from hole R13-19 is unsuitable for highwall mining, based on the CAT® Site Evaluation Tool For Highwall Miners;

(http://webtools.cat.com/globalmining/highwallminers/index.html).

Response BJ 14 – Round 1

Appendix D5 Section D5.3.3.2 has been updated as requested.

Comment BJ 14 – Round 2

No comment received.

Response BJ 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 15 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-4, Exhibits 1 – 7, Please include the drill hole locations on these isopach maps.

Response BJ 15 – Round 1

Updated as requested.

Comment BJ 15 – Round 2

No comment received.

Response BJ 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 16 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Exhibit 8, The map labeled as the isopach map of the Lower Masters bed is a contour of a surface. Please replace the contour map with the appropriate isopach map

Response BJ 16 – Round 1

Updated as requested.

Comment BJ 16 – Round 2

No comment received.

Response BJ 16 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 59 – Round 1

EXHIBITS, Addendum D5-4, Exhibit 1, The title on the map declares that this is an overburden isopach, but the bed name is missing. Please indicate which bed this map pertains to.

Response BJ 59 – Round 1

Updated Exhibit 1 of Addendum D5-4 as requested.

Comment BJ 59 – Round 2

No comment received.

Response BJ 59 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 60 – Round 1

EXHIBITS, Addendum D5-4, Exhibit 8, The name of the PDF file for this exhibit indicates that this is an isopach map of the Masters Lower coal bed. The title in the map indicates that this is the contour of the base of the Masters coal seam. Please correct the title of the PDF file.

Response BJ 60 – Round 1

The title of Exhibit 8 of Addendum D5-4 will be revised in the electronic copy, as requested.

Comment BJ 60 – Round 2

The title of Exhibit 8 in Addendum D5-4 remains unchanged. This appears to be an inadvertent oversight on the part of WWC.

The Current PDF file name is:

ADD_D5_4_EX_8_MASTERS_ISO-MASTERS_LOWER_R1.

The Title of the map in the Title Block is:

BOTTOM ELEVATION OF MASTERS COAL SEAM.

Please correct the name on the PDF file to better represent the contents of the exhibit.

Response BJ 60 – Round 2

Thank you for catching the oversight. The name on the PDF file has been changed to more accurately represent the contents of the map. The PDF with the corrected name will be emailed to Mr. Kristiansen.

Comment BJ 60 – Round 3

No comment received.

Response BJ 60 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment BJ 61 – Round 1

EXHIBITS, Addendum D5-6, Exhibit 1, we commend RAMACO for sampling overburden locations on 80 acre spacing. There are some gaps in the sampling plan, however, that need to have core holes drilled to fill them. The underground Coal Rules and Regulations in Chapter 7, Section 1(a)(i) are specific on ensuring that overburden geology is characterized in all locations where overburden will be removed or subsidence may occur. This essentially means that all areas above the planned coal panels need representative cores drilled to a sufficient density, approximately one hole for every quarter section of affected area. Based on that, the following locations still need to be characterized by overburden sampling:

NE1/4, sec.22, T.57N., R.84W.

NW1/4, sec.15, T.57N., R.84W.

NW1/4, sec.14, T.57N., R.85W.

SE1/4, sec.10, T.57N., R.85W.

Response BJ 61 – Round 1

A drilling rig was not able to enter the areas NW1/4, Sec.14, T.57N., R.85W and SE1/4, Sec.10, T.57N., R.85W. due to the steepness of the terrain, therefore no samples were obtained. Sampling data for drill holes BH 166-78 and BE 326-78 have been incorporated into Addendum D5-2 and Addendum D5-7 to characterize the overburden in Sections 15 and 22.

Comment BJ 61 – Round 2

No comment received.

Response BJ 61 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 62 – Round 1

EXHIBITS, Addendum D5-6, Exhibit D5.1-1, Kudos to the staff member that created this slope analysis map. It is clear and concise and the histogram is very informative. Good job.

Response BJ 62 – Round 1

Thank you for this comment.

Comment BJ 62 – Round 2

No comment received.

Response BJ 62 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 1 – Round 1

Appendix D5, The Coal Rules and Regulations, Chapter 7, Section 1(a)(i)(A) states that information required for the geological description pursuant to Chapter 2, shall be as follows: for areas where surface operations and facilities will cause removal of overburden down to a level of the coal seam, all information outlined in Chapter 2. Overburden sampling has not been performed in many of the locations where overburden will be removed during the mining operations. Additional sampling will be required to assess overburden chemistry in all areas where overburden removal will occur. The intensity of sampling should be 1 core per 160 acres (per quarter section). The LQD requests sampling every 1,900 linear feet on longer proposed disturbance areas or, at minimum, two cores within shorter disturbances separated sufficiently to provide a representative characterization of the proposed disturbance.

> a. Not all overburden has been characterized during analysis. Several lenses of shallow coal mixed with partings or narrow coal seams that will not be mined were not characterized. Because all overburden must be handled so as not to negatively affect surface water, groundwater or vegetation, all overburden must be adequately characterized. Therefore, the LQD requests additional characterization of all overburden that will be backfilled into disturbed areas. It must also be stated that special handling and/or identification and use of topsoil/subsoil replacement may be required if unsuitable backfill or soil is

placed within 4 feet of the surface on upland areas or within 10 feet of the surface in stream channels.

Response DS 1 – Round 1

Please see response to BJ 61.

Comment DS 1 – Round 2

Response is not adequate. The LQD requires additional overburden suitability analysis to be included for all areas to be disturbed during mining. No additional baseline overburden suitability assessment laboratory data was provided for holes BH 166-78 and BE 326-78. Please provide the raw data. Also, provide a commitment to sample overburden from areas to be disturbed by mining (specifically identify the pit sequence) where overburden baseline was not provided during baseline sampling. Sample every 1,300 feet in the sequence prior to overburden removal. Report the analytical results in the annual report for the year of initial disturbance for the pit sequence. Also, since RAMACO is reluctant to provide a special handling commitment, sampling must be performed at 500 ft. spacing on backfilled and rough graded pits (4 ft. depth on upland areas and 8 ft. depth under stream channel or permanent impoundments) to assure quality of surface materials. Also, if groundwater is expected in the pits, unsuitable materials must not be placed in the groundwater zone. Of the backfilled pit. (DS)

Response DS 1 – Round 2

For the location of the laboratory data for holes BH 166-78 and BE 326-78, please refer to Response BJ 61 (Round 1). Sampling data for drill holes BH 166-78 and BE 326-78 have been incorporated into Addendum D5-2, Addendum D5-7 and Table D5.4-2.

For the following commitments, please refer to the Mine Plan since these commitments are for operations rather than baseline studies. Please note that the text for these commitments has been in place. The following discussion provides the location of each commitment.

1. Section MP.4.6.1 states that the overburden sampling program will include one drill hole sample taken every 40 acres (16 sample locations per square mile) within areas where surface operations will cause removal of overburden down to the level of the coal seam. The delineation of 40 acres more correctly states the suggestion in Guideline No. 1 on page 9 in Section II(B)(3)(a)(1) as opposed to the suggestion of 1,300 feet. The first paragraph of Section MP.4.6.1 states that any additional overburden quality sampling will be submitted to WDEQ/LQD in the mine's annual reports. No changes have been made in response to this comment since the text has been in place.
2. Section MP.4.6.2 states in the first paragraph that a backfill sampling program will be set on a 500-foot grid. The first paragraph of Section MP.4.6.2 also

states that the sampling program will ensure that unsuitable materials aren't placed within the following depths of the land surface: four feet for uplands, six feet for ephemeral channels, and 10 feet for permanent impoundments or major channels and their 100-year floodplains. No changes have been made in response to this comment.

Comment DS 1 – Round 3

Response is not adequate. The LQD requires additional overburden suitability analysis to be included for all areas to be disturbed during mining. No additional baseline overburden suitability assessment raw data was provided for areas to be disturbed as previously requested.

Response DS 1 – Round 3

A commitment to obtain necessary overburden samples and conduct overburden suitability analysis prior to mining related disturbance, as required by WDEQ/LQD, has been incorporated into Section MP.4.3 of the Mine Plan. Also a commitment to obtain samples at least every 1,500 feet of trench length and at both ends of a trench has been added to Section MP.4.3. No change to Appendix D5 was made in response to this comment.

Comment DS 2 – Round 1

Appendix D5, Section D5.4. – documentation of protocols that differ from those approved by the Administrator in Guideline 1 typically require a signed document by LQD staff, not a request for different procedure signed by the company. This issue has been discussed with other mining companies and it has been determined that documentation of approval by LQD staff will be required if sampling/analytical protocols differ from those required by standing LQD policy. Please provide documentation of LQD staff approval for the 10-ft. overburden sampling interval.

Response DS 2 – Round 1

See Attachment A to this response package. This has also been added to Addendum D5-6 pages 4 and 5.

Comment DS 2 – Round 2

No comment received.

Response DS 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 3 – Round 1

Appendix D5, Table D5.4-1 and Table D5.4-2 do not provide the current approved selenium concentration limits of 0-3 ppm (suitable), 3-8 ppm (marginal) and > 8 ppm

(unsuitable). Please be sure to include the current approved suitability criteria as shown in Guideline 1, page 42. This will change the conclusions of the discussion provided in the Appendix D5 text. Also, in Table D5.4-2, please provide the correct units for analytical results in mg/Kg, not mg/L.

Response DS 3 – Round 1

Please refer to BJ 6 response. Appendix D5 text, Table D5.4-1, and Table D5.4-2 are updated as requested.

Comment DS 3 – Round 2

No comment received.

Response DS 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 4 – Round 1

Appendix D5, The permit application provided to LQD staff for review has duplicated data provided after the map identified as Exhibit 1 which should be deleted. The exhibit should also be better identified as Exhibit D5-1 or something similar to clarify placement in the permit application should it become separated from the document in the future.

Response DS 4 – Round 1

The electronic copies were provided to LQD staff for review purposes. The hard copy on file is the official version. Also, please see response to Comment DS 5.

Comment DS 4 – Round 2

Response is not adequate. This issue was not addressed in the Round 1 comment response package. Duplicate data in the hard copy should be deleted.

Response DS 4 – Round 2

The duplicate soil analysis reports have been removed from Appendix D5. The reports were removed from Addendum D5-5 (pages Addendum D5-5-21 through Addendum D5-5-92). The reports remain in Addendum D5-7 since this is the addendum specified for the soil analysis reports. The Change Index identifies this revision. No other change is necessary since page Addendum D5-5-92 was the last page and Addendum D5-6 has unique pagination.

Because the exhibit name of "Exhibit 1" is specific to the overburden sampling plan of 8/26/2013 that was presented to WDEQ, and this name is referenced in the document, the name has not been changed. The exhibit has a unique page number

(page Addendum D5-6-3) which will ensure that the exhibit is always located properly in the permit.

Comment DS 4 – Round 3

Response is not adequate. Two of the first proposed disturbance areas in Sections 22 and 15 have no overburden baseline sample analyses provided. The LQD understands that these areas are not accessible by drilling equipment at this time, but baseline sampling is required prior to initial disturbance. Therefore, the LQD may be amicable to approval of the application if a condition exists to provide an Appendix D5 revision with overburden.

Response DS 4 – Round 3

A commitment to obtain necessary overburden samples and conduct overburden suitability analysis prior to mining related disturbance, as required by WDEQ/LQD, has been incorporated into Section MP.4.3 of the Mine Plan. Also a commitment to obtain samples at least every 1,500 feet of trench length and at both ends of a trench has been added to Section MP.4.3. No change to Appendix D5 was made in response to this comment.

Comment DS 5 – Round 1

Appendix D5, Comparisons were made between Exhibit 1, the soils map and the Mine Plan map. Distinct differences in the affected area and permit boundaries were observed. Please be sure that correct boundaries for the proposed affected area and permit area are provided on all maps. Please also provide the contour interval on this exhibit.

Response DS 5 – Round 1

Addendum D5-6 is a copy of the overburden sampling plan as presented to WDEQ on 8/26/2013, which referenced Exhibit 1. Therefore, no changes to the exhibit will be made.

Comment DS 5 – Round 2

Response is not adequate. All exhibits presented in this permit must show the correct permit boundary and affected area boundaries, or, if the boundaries are removed, must reference a map of the same scale that contains the correct boundaries. Please correct the permit boundaries and affected area boundaries on all exhibits in this permit application.

Response DS 5 – Round 2

The permit boundary on Exhibit 1 in Addendum D5-6 was removed from the exhibit due to this boundary not being the same as that presented in the current permit as requested by the reviewer. However, the current boundary was not added to the

exhibit because this exhibit represents the information provided to, and approved by, WDEQ for the overburden sampling plan. Instead, a note has been added to the exhibit that references Exhibit C1a of the Adjudication File for the correct permit boundary of the Brook Mine.

Comment DS 5 – Round 3

No comment received.

Response DS 5 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 2 – Round 1

Appendix D5, Page D 5-9 refers to samples collected from roof and floor from "many" locations throughout the permit area. However, supporting documentation appeared to be from only two borings and included two roof and one floor sample. In addition, the laboratory noted the floor sample did not have sufficient length and a correction factor was used to determine unconfined compressive strength. Additional structural analysis of the overburden, interburden and floor is required.

Response KM 2 – Round 1

During preparation of the MSHA Ground Control Plan additional coring of the coal and overburden will occur, data gathered from this activity will be supplied to WDEQ/LQD when it is received. Please see response to BJ 14.

Comment KM 2 – Round 2

No comment received.

Response KM 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 3 – Round 1

Appendix D5, Please provide a discussion of the structural analysis of the overburden and interburden. The discussion shall address the potential for subsidence during and after mining.

Response KM 3 – Round 1

Structural analysis of the overburden, interburden, floor, and roof must be conducted for the MSHA Ground Control Plan. Information gathered for this plan will be provided when it is received. No text was updated in response to this comment. Please see response to BJ 14.

Comment KM 3 – Round 2

No comment received.

Response KM 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 4 – Round 1

Appendix D5, Please discuss the aquifer(s) below the lowest coal seam and the potential for mining to impact these aquifer(s).

Response KM 4 – Round 1

The lowest coal seam targeted for mining is largely dry and is also confined by a clay layer. The underburden is not considered an aquifer therefore no impacts will occur.

Comment KM 4 – Round 2

No comment received.

Response KM 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 24 – Round 3 (New Comment)

On page D5-12, Section D5.3.3.4, please specify what the underburden produces at 0.5 gpm.

Response KM 24 – Round 3 (New Comment)

Section D5.3.3.4 has been revised to clarify that groundwater is produced in the underburden at 0.5 gpm.

Comment Muk 1 – Round 1

Appendix D5, Section D5.3.3.2 Overburden and Interburden, 1. This section provides a discussion of the thickness of interburden and not overburden. Please provide a discussion (or a reference) on the thickness of the overburden. (MK)

Response Muk 1 – Round 1

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.2.

Comment Muk 1 – Round 2

Response not accepted. In addition to the reference to Addendum D5-3 cross section figures, please provide a textual interpretation on the overburden thickness. Please

refer to D53.3.2 interburden thickness description as an example for the requested description. (MK)

Response Muk 1 – Round 2

A qualitative discussion of the Carney overburden thickness has been added to the first paragraph of Section D5.3.3.2.

Comment MuK 1 – Round 3

Response accepted.

Comment Muk 2 – Round 1

Appendix D5, Section D5.3.3.3 Coal, 2. On Page D5-10, there is a good discussion about the thickness of the two coal seams. Please provide a description on the depth from land surface to these coal seams. (MK)

Response Muk 2 – Round 1

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.3.

Comment Muk 2 – Round 2

Response not accepted. In addition to the reference to Addendum D5-3 cross section figures, please provide a textual description/interpretation on the depth from land surface to the different coal seams targeted by the mine plan. (MK)

Response Muk 2 – Round 2

A qualitative description of the overburden material from the ground surface to the top of the Carney coal seam has been added to the middle of the second paragraph of Section D5.3.3.3. Discussion of the total material from the ground surface to the top of the Masters Seam has been added to the end of the third paragraph in Section D5.3.3.3. As requested, the revised text adds qualitative background on the varying depths of the total material from the land surface to the top of the two respective target coal seams, Carney and Masters.

Comment MuK 2 – Round 3

Response accepted.

Comment Muk 3 – Round 1

Appendix D5, Section D5.3.3.3 Coal, 3. Page D5-10 states, "Monarch seam exist within isolated portions of the mine areas as shown on the geologic cross sections in Addendum D5-3 and may present a secondary target." However, Table D5.3-2 does not provide the coal quality characteristics for Monarch coal seam. If Monarch seam

is part of the mine plan, please include the coal quality characteristics of Monarch coal seam in Table D5.3-2 and a description of thickness and depth from land surface.

Response Muk 3 – Round 1

Table D5.3-2 has been updated with the coal quality characteristics for the Monarch seam. The overburden and seam thickness are included on the geologic cross-sections located in Addendum D5-3 referenced in the text.

Comment Muk 3 – Round 2

Response not accepted. It is acknowledged and accepted that Table 5.3-2 is updated with coal quality characteristics of Monarch coal seam. In addition to the reference to Addendum D5-3 cross section figures, provide a textual interpretation of thickness and depth from land surface for the Monarch coal seam. (MK)

Response Muk 3 – Round 2

Textual interpretation of the Monarch coal seam thickness and the depth of material above the top of the Monarch seam have been added to the end of fourth paragraph in Section D5.3.3.3.

Comment MuK 3 – Round 3

Response accepted.

Comment Muk 4 – Round 1

Appendix D5, Section D5.3.3.3 Coal, 4. Please include a discussion on Dietz (1, 2, 3) coal seams, if they are present in the mine permit boundary. If they are part of the mine plan, please include the coal quality characteristics in Table D5.3-2. (MK)

Response Muk 4 – Round 1

Discussion about the Dietz seams has been added in Section D5.3.3.3. These coal seams are not part of the currently proposed Mine Plan. Therefore, the quality data were not included in the table.

Comment Muk 4 – Round 2

No comment received.

Response Muk 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 5 – Round 1

Appendix D5, Section D5.3 Geology of Mine Area, 5. Please provide a description of the stratigraphic units below the Masters coal seam. (MK)

Response Muk 5 – Round 1

Section D5.3.3.4 has been added to discuss the underburden.

Comment Muk 5 – Round 2

Response not accepted. Please expand the discussion in the newly added Section D5.3.3.4 to include a textual interpretation of the underburden thickness. (MK)

Response Muk 5 – Round 2

The text in Section D5.3.3.4 has been revised to include discussion of the underburden thickness.

Comment MuK 5 – Round 3

Response accepted.

Comment Muk 6 – Round 1

Appendix D5, Addendum D5-3 Geologic Cross Sections, 6. Several of the geologic cross sections show UNK – unknown coal seam (Stringer). Please include a brief discussion about this stringer in Section D5.3.3.3 (MK)

Response Muk 6 – Round 1

Discussion about the stringers with unknown names has been added to fifth paragraph in Section D5.3.3.3.

Comment Muk 6 – Round 2

Response not accepted. In addition to the reference to cross section figures, please provide a textual description on the variability, interpreted thicknesses of these stringers. (MK)

Response Muk 6 – Round 2

Further discussion of the unknown coal stringers has been added to the end of the fifth paragraph of Section D5.3.3.3.

Comment MuK 6 – Round 3

Response accepted.

Comment Muk 7 – Round 1

Appendix D5, Addendum D5-4 Isopachs, 7. Please include the wells/drill holes (control points) used to interpret the isopachs and elevation contours in the maps. In addition, label all the control points with names and the thickness (or elevation, as

appropriate). This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Response Muk 7 – Round 1

Addendum D5-4 Exhibits 1 to 8 have been updated with drill hole locations as requested. A reference to Addendum D5-2 has been added to the exhibits for seam name and thickness.

Comment Muk 7 – Round 2

Response not accepted. It is acknowledged and accepted that the labels for all the control point names were included. However, thickness (or elevation, as appropriate) labels are not included as requested. Is it relatively easy for the software that was used for isopach elevation contours to label the thickness (or elevation)? The intent of this comment is to increase the robustness of the review of the interpreted contours by having appropriate point control data plotted in the same map. This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Response Muk 7 – Round 2

As requested, Addendum D5-4 Exhibits 1-8 have been revised to include thickness or elevation, as appropriate, of the applicable seam at each drill hole. It's worth noting, that generally the thicknesses/elevations were obtained from the lithologic logs in Addendum D5-2; however, some drill holes were interpreted differently using analysis of the electric logs (Addendum D5-2), lithologic logs (Addendum D5-2) and cross sections (Addendum D5-3).

Comment MuK 7 – Round 3

Response not accepted. The Table of Contents for Addendum D5-4 indicates that there is an "Exhibit l: Overburden Isopach Overlying the Carney Coal Seam". This Exhibit is not present in the Cheyenne Office copy of the Round 2 response submittal. (MK)

Response MuK 7 – Round 3

Exhibit 1 Overburden Isopach Overlying the Carney Seam was inadvertently left out of the Round 2 comment response package. The exhibit has been provided as part of the Round 3 response package.

Comment Muk 8 – Round 1

Appendix D5, Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table, 8. Please describe these analyses, methodology, results and provide an interpretation of their applicability to the mine/reclamation plan. (MK)

Response Muk 8 – Round 1

Please see response to BJ 14.

Comment Muk 8 – Round 2

No comment received.

Response Muk 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Appendix D6

Comment BJ 17 – Round 1

Appendix D6, Hydrology, Section D6.2.3, Pg. D6-20, Narrative in the last paragraph – why were no samples taken in Hidden Water Creek? Please explain.

Response BJ 17 – Round 1

No flow was observed in Hidden Water Creek during baseline sampling, so no samples were taken. The text has been revised to reflect that there were no flows observed.

Comment BJ 17 – Round 2

No comment received.

Response BJ 17 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 18 – Round 1

Appendix D6, Hydrology, Table D6.1-8, Regarding the HEC-RAS modeling results – The values for Hidden Water Creek and Slater Creek are identical. Is this accurate or is it a typographical error? Please clarify.

Response BJ 18 – Round 1

Updated table to remove typographical error.

Comment BJ 18 – Round 2

No comment received.

Response BJ 18 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 19 – Round 1

Appendix D6, Hydrology, Addendum D6-7, The well construction summary sheets need to have the coal bed names listed on the well lithology sections to the right of the well diagrams. Please label accordingly.

Response BJ 19 – Round 1

Updated as requested.

Comment BJ 19 – Round 2

No comment received.

Response BJ 19 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 20 – Round 1

Appendix D6, Hydrology, Attachment D6-8-A, Pg. D6-8-20, A statement is made that water within both coal seams is expected to be "high quality" and "good" water. Please define the meaning of those characterizations. Are these judgments based on MCLs or some other value? Are they being classified by some constituent values? Or is there another metric being used? Please clarify.

For example; referencing WQD R&R, Chapter 8, Table I, Class I, II, or III would better define the essential characteristics of the water quality. Numerical values of critical constituents, such as TDS, could also serve to define the quality as "good". More descriptive qualifiers are needed to judge the water quality.

Response BJ 20 – Round 1

Revised text as requested.

Comment BJ 20 – Round 2

No comment received.

Response BJ 20 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 21 – Round 1

Appendix D6, Hydrology, Attachment D6-8-E, Hydrographs, The x parameter, time, is depicted in days. It appears that this scale should have been adjusted to show time in hours due to the rapid changes seen in the hydrographs. Please use a finer scale for the x axis.

Response BJ 21 – Round 1

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-36a and D6-8-37a. These additional hydrographs detail the

water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 21 – Round 2

No comment received.

Response BJ 21 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 22 – Round 1

Appendix D6, Hydrology, Attachment D6-8-F, The above mentioned comment can also be applied to the Carney well hydrographs. Please adjust the x axis to hours.

Response BJ 22 – Round 1

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data as well. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-39a and D6-8-40a. These additional hydrographs detail the water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 22 – Round 2

No comment received.

Response BJ 22 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 23 – Round 1

Appendix D6, Hydrology, Addendum D6-9, Pg. D6-9-2, Please include a column in Table D6-1 that indicates the elevation of the bottom of the well or TD. The total water column is important when assessing groundwater characteristics. Please correct.

Response BJ 23 – Round 1

Table D6-1 has been revised as requested.

Comment BJ 23 – Round 2

No comment received.

Response BJ 23 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 24 – Round 1

Appendix D6, Hydrology, Addendum D6-10, Pgs. D6-10-28 through D6-10-53, On the sample analysis reports, Please provide a brief narrative at the beginning of the lab results to give context to the data. Footnotes on the pages refer to MCLs or other parameters of water quality used for classification. However, the context that is used to define these parameters is missing. The assumption is made that these quality values are derived from the WQD R&R, Chapter 8, Table I definitions. But that is uncertain as no frame of reference is given. A brief sentence or two at the beginning of the section would clarify the numerical standards used in the report. Please adjust the narrative accordingly.

Response BJ 24 – Round 1

Page D6-10-27a was added to provide the requested narrative.

Comment BJ 24 – Round 2

No comment received.

Response BJ 24 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 25 – Round 1

Appendix D6, Hydrology, Please include the lithology of the sampled zone, either in the sampling information sheets, or on the sample analysis reports. Identification of the lithology sampled needs to be readily available with the analysis. This applies to all increments sampled. The sampled zones do have identification on the sample sheets with a shorthand nomenclature but persons unfamiliar with the lithology of the prospect area would be at a disadvantage when evaluating the sample results. A simple reference table at the beginning of the section would be sufficient. For example; MST=Masters, CRN=Carney, AL=Alluvium. Non-geologists need some frame of reference. Please create a clarifying narrative.

Response BJ 25 – Round 1

Reference text with abbreviations defined has been added on page Addendum D6-10-27a, as requested.

Comment BJ 25 – Round 2

No comment received.

Response BJ 25 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 2 – Round 1

Appendix D6-Hydrology, D6.1x – The drainage basin description and surface water quantity sections are lacking detail. As mentioned in M. Kunze's comments, the data from the terminated Slater Creek USGS gauge, and historical monitoring data from Big Horn Mine (permit no. 213) should be included.

The data collected at the monitoring stations that is presented in Addendum D6-4 does not appear to agree with the statement that Slater Creek is a "predominantly ephemeral" stream. Please reconcile the text with the data.

Response DM 2 – Round 1

Peak flow data from the USGS gage station on Slater Creek has been provided. See response to MK 30. The text in Section D6.1.5.2 has been updated to clearly indicate that Slater Creek is an ephemeral stream.

Comment DM 2 – Round 2

No comment received.

Response DM 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 3 – Round 1

Appendix D6-Hydrology, D6.2.4 States that Groundwater Rights are in Appendix E2 of the Adjudication Volume. Groundwater Rights are actually listed in Appendix B2. Please Correct.

Response DM 3 – Round 1

Text revised as requested.

Comment DM 3 – Round 2

No comment received.

Response DM 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 5 – Round 1

Appendix D6, 2. The pre-mining potentiometric map for the Masters coal seam shows the elevation of the groundwater at a higher elevation than the surface elevation in Sections 11 and 12 (in the vicinity of Slater Creek outside of the permit area). Either show the potentiometric surface as doted across this area or revise the potentiometric

lines such that the groundwater elevation is below the ground surface elevation. Issue addressed by BJ Kristiansen. Please see comment No. 65.

Response KM 5 – Round 1

Exhibits D6.2-2 and D6.2-3 have been revised as requested.

Comment KM 5 – Round 2

No comment received.

Response KM 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 6 – Round 1

Appendix D6, 3. The groundwater elevation for the Carney coal seam in monitor well 578417-CRN was given as 3795.59. The potentiometric contour for 3800 is drawn south of this monitor well. Please correct the contour line to be consistent with the groundwater elevation shown for monitor well 578417-CRN. Correction of this contour line may also adjust how the contour lines for 3780 and 3760 are drawn, such that they may be drawn consistent with other contour lines.

Response KM 6 – Round 1

Contours in Exhibit D6.2-3 have been revised as requested.

Comment KM 6 – Round 2

No comment received.

Response KM 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 7 – Round 1

Appendix D6, 4. Page D6 8-8: The text refers to the pump test in the Carney coal seam. According to the procedures in the previous section, transducers were placed in CRN and CRN-OB; however on the referenced page, it states transducers remained in MST and MST-OB after pumping. LQD believes this to be a typographical error.

Response KM 7 – Round 1

LQD is Correct, this is a typographical error. The sentence should read "After the pumping period, the transducers remained in CRN1 and CRN-OB until 8:00AM on November 16, 2013." Page D6-8-8 has been updated with the typographical error corrected and a replacement page is included.

Comment KM 7 – Round 2

No comment received.

Response KM 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 8 – Round 1

Appendix D6, 5. Please discuss why the water levels rose in the Carney coal seam during the pump test in the Masters coal seam.

Response KM 8 – Round 1

This comment is addressed in comment 19 from Muthu Kuchanur.

Comment KM 8 – Round 2

No comment received.

Response KM 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 9 – Round 1

Appendix D6, 6. What effect would a leaking pump have on the results of the pump test in the Masters coal seam?

Response KM 9 – Round 1

This comment is assumed to originate from the note on page Addendum D6-8-30. This note is in reference to activities that occurred immediately after the pumping test was shut off. The pump used for the pumping test did not have a foot valve. Therefore, after the pump was shut off, water in the discharge pipe immediately began to drain back into the well. The pump and piping was pulled out of the well as fast as possible and not all of the water in the pipe drained back into the well. However, the personnel conducting the pumping test were concerned that the water draining into the well would result in a rapid rise in the water level in the well and wanted to note it for the record on the field data sheet. It is estimated that less than 2 gallons of water actually drained out of the line into the well while the pump was being pulled which would result in a water level rise in the well of less than 0.25 foot. Given that the water level recovery in the well was very rapid immediately upon cessation of the pumping test (approximately 2 feet in the first ten minutes after the pumping test ended) and the early time recovery data was largely ignored for the purposes of doing the aquifer characterization evaluations, the leaking pump would not have had an impact on the results of the pumping test.

Comment KM 9 – Round 2

No comment received.

Response KM 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 10 – Round 1

Appendix D6, 7. Please make sure all maps that are stamped are also signed and dated by the engineer, as required by regulation.

Response KM 10 – Round 1

All maps that are stamped will be signed and dated by the engineer as required by law. This does not include digital versions. The digital copies have been provided for WDEQ review. The hard copy is the official copy.

Comment KM 10 – Round 2

No comment received.

Response KM 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 17 – Round 2 (New Comment)

Based on LQD's review of the well logs for Wells 578409-CRN-OB and 578409-MST-OB, the wells were screened in a coal seam, not in overburden. Please address all hydrologic information discussing overburden which was based on these wells and which may be in error.

Response KM 17 – Round 2 (New Comment)

The "OB" designation refers to "observation" rather than overburden. It is noted that this is a poor naming convention, but the naming had already been established. We apologize for the confusion. Additionally, Section D6.2.1.1 states that electric logs with resistivity data have demonstrated that the overburden is dry. Section D6.2.2.1 states that no monitoring wells were completed in the overburden or interburden because no water was found in these units during drilling. The nomenclature page in Addendum D6-10 (page Addendum D6-10-27A) has been revised to state: OB=observation.

Comment KM 17 – Round 3

No comment received.

Response KM 17 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 18 – Round 2 (New Comment)

The well logs for 578409-CRN and 578409-CRN-OB show the wells are screened in a coal seam labeled "Masters", not Carney. This appears to be a typographical error on the well log. Please correct.

Response KM 18 – Round 2 (New Comment)

The typographical error has been corrected on the well logs 578409-CRN and 578409-CRN-OB.

Comment KM 18 – Round 3

No comment received.

Response KM 18 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment MK 29 – Round 1

Appendix D6-Hydrology, Section D6.1.2 Drainage Basin Description, 3. On Page D6-2 it is stated that Slater Creek is an ephemeral stream. Aerial imagery shows a riparian area with trees and subirrigation occurring along much of the channel. PEM wetlands are also present as documented in Appendix D10. It would seem that an ephemeral stream may not be able to support these features. Please provide the justification why Slater Creek is considered an ephemeral stream, and that the stream does not contain intermittent characteristics where it is not below the local water table for a portion of the year. (MDK)

Response MK 29 – Round 1

Please see response to DM2.

Comment MK 29 – Round 2

Response not accepted. Please include additional discussion on the hydrology of Slater Creek to include what was added to Page D11-8 in Appendix D-11 in response to Comment MK 8: *Infiltration of precipitation into the burn and then slow release of the stored water acts as a water source for the subirrigation and surface flow of Slater Creek*.

In addition, a comparison of the 2014 observed flows between the upstream and downstream stations on Slater Creek shows that flows were higher at the upstream

station for the majority of the period. This may suggest Slater Creek is a losing stream. Please discuss this further in the description of the hydrology of Slater Creek. (MDK)

Response MK 29 – Round 2

The additional discussion for Slater Creek hydrology has been added to the middle of the third paragraph in Section D6.1.2 as requested.

Comment MK 29 – Round 3

Response not accepted. The additional discussion on the hydrology of Slater Creek was included as requested. However, based on observations from the AVF reconnaissance site visit to Slater Creek on September 24, 2015, Slater Creek should not be characterized as an ephemeral stream. At the time of the site visit, standing water and a small amount of flow was observed in the channel, particularly in Section 12. This flow was observed during a dry period when no precipitation had occurred previously. Therefore the flow was due to some other source besides direct response to precipitation. The permit application indicates that some discharge to Slater Creek occurs from infiltration of precipitation into high perched scoria burn above the stream channel; this water is stored and slowly released to Slater Creek. It appears that this flow may form a shallow water table that provides baseflow to the channel.

In my opinion Slater Creek is better described as an intermittent stream with a few isolated reaches that may be perennial. Please revise any text in the permit application that describes Slater Creek as an ephemeral stream (Page D6-2-Section D6.1.2, Page D6-11 -Section D6.1.5.2, Page D6-11-Section D6. 1.5.3, Page RP-45-Section RP .8.5.2). (MDK)

Response MK 29 – Round 3

Slater Creek has been described as intermittent stream, as requested, in the following areas of the text: in Appendix D6, the third paragraph of Section D6.1.2, the third paragraph of Section D6.1.5.2, the second paragraph of Section D6.1.5.3.; in Appendix D11 the second paragraph of Section D11.3; and in the Reclamation Plan, the first paragraph of Section RP.8.5.2.

Comment MK 30 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 4. The USGS operated a peak flow gage on Slater Creek from 1967 to 1981 (Station No. 06299900, http://nwis.waterdata.usgs.gov/wy/nwis/inventory/?site_no=06299900&agency_cd=USGS). The gage was located just downstream of the proposed permit boundary near the confluence with the Tongue River. Please incorporate the annual peak flow data from this station into the permit application to illustrate the range of peak flows that might be expected from Slater Creek. (MDK)

Response MK 30 – Round 1

The text and Tables D6.1-2 and D6.1-3 have been revised to include peak flow data for USGS Station No. 06299900.

Comment MK 30 – Round 2

No comment received.

Response MK 30 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 31 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 5. Some of the U.S. Army Corps of Engineers references cited in the text (2000, 2001) do not appear in the References Section (Section D6.3). Please add these to the references list. (MDK)

Response MK 31 – Round 1

The text edits have been made as requested.

Comment MK 31 – Round 2

Response not accepted. The citation (U.S. Army Corps of Engineers, 2001) on Page D6-3 still does not appear in the reference list. Please add this to the Reference Section (Section D6.3). (MDK)

Response MK 31 – Round 2

The year in the U.S. Army Corps of Engineers citation on page D6-3 was changed to 2009 to match the references provided in Section D6.3. The change was an inadvertent oversight on the part of WWC.

Comment MK 31 – Round 3

Response accepted.

Comment MK 32 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 6. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section D6.3. (MDK)

Response MK 32 – Round 1

The text edits have been made as requested.

Comment MK 32 – Round 2

No comment received.

Response MK 32 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 33 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 7. Please explain in the text if the existing impoundments (stock reservoirs, old mine pits, etc.) in both the Slater Creek and Hidden Water Creek drainages were considered in the routing functions for the HEC-HMS runoff estimates. These features would likely have an effect on attenuating peak flows. (MDK)

Response MK 33 – Round 1

The text has been revised to clarify the impoundments are not included the HEC-HMS model. As described, peak flow estimates should be conservatively high without attenuation of storm events by impoundments.

Comment MK 33 – Round 2

No comment received.

Response MK 33 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 34 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 8. As the text states on Page D6-5, the HEC-HMS runoff estimates in Table D6.1-7 are higher than the Miller (2003) equation estimates. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) equation estimates.

The Miller (2003) equation for this region used, in part, data from the USGS peak flow gage on Slater Creek, so it would seem that the Miller (2003) estimates may be more reasonable. For example, compared to the HEC-HMS estimates, the 15-year record from the peak flow gage on Slater Creek would not register at anything greater than a five-year event. Furthermore, the May 18, 1978 event on Slater Creek resulted in a peak flow of 1,100 cfs, which according to the HEC-HMS estimates would only be around a 2-year event. USGS studies have shown that the May 1978 flood event was estimated to be a 100-year event on some parts of the Tongue River in this area (http://pubs.usgs.gov/pp/1244/report.pdf). (MDK)

Response MK 34 – Round 1

A discussion in the text has been included that speaks to why the HEC-HMS results are higher than the Miller results. Additionally, a discussion acknowledges the report by the USGS on the May 1978 flood. The Miller analysis does appear to more closely estimate the peak flowrates for flood events for the short data record on Slater Creek. However, hydraulic calculations will continue to use the HEC-HMS results because of the conservative results and the ease in comparing to the postmining hydrologic environment. HEC-HMS provides a way to change the properties of the drainage basins to reflect what will be present postmining, and the comparison between the premining and postmining HEC-HMS models quantifies the magnitude of the impact the Brook Mine will have on the hydrologic balance.

Comment MK 34 – Round 2

No comment received.

Response MK 34 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 35 – Round 1

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 9. Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

Response MK 35 – Round 1

The locations of the surface water monitoring sites have been reported to the quarter-quarter, which is an adequate level of accuracy to report the monitoring locations.

Comment MK 35 – Round 2

Response not accepted. The location coordinates are needed for plotting the locations of the stations; the quarter-quarter does not provide the needed level of accuracy for this. Reporting the northing/easting State Plane coordinates for monitoring locations is standard practice in other LQD coal permits and would be required when reporting station information in the Annual Report as part of the LQD Coal Annual Report Format (CARF). Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

Response MK 35 – Round 2

The northing and eastings for the surface water monitoring station have been added to Table D6.1-11, as requested.

Comment MK 35 – Round 3

Response not accepted. Although the coordinates were included in Table D6.1-11 as requested, the location appears incorrect for the upstream monitoring station on Slater Creek (SM578512-SW-1). During the AVF reconnaissance site visit to Slater Creek on September 24, 2015, station SM578512-SW-1 was observed approximately 1,800 feet downstream from where it is currently shown in Exhibit D6.1-2. Please see the attached map and photo below. Please also note that the location observed in the field matches what is shown in Addendum D6-5 Figure D6-2. Please provide the correct coordinates and location for station SM578512-SW -1 in Table D6.1-11 and Exhibit D6.1-2. Please also update the coordinates in Table MP.7- l and the appropriate permit application Exhibits (Exhibit D6. l-2, Exhibit MP.7- l, Exhibit RP.8-5) to show the correct location of the station. (MDK)

Response MK 35 – Round 3

The locations of all the surface water stations have been revised throughout the permit to correctly match the surveyed locations. The following tables and exhibits have been revised as requested: Table D6.1-11, Table MP.7-1, Exhibit D6.1-2, Exhibit MP.7-1 and Exhibit RP.8-5.

Comment MK 36 – Round 1

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations,10. On Page D6-8, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

Response MK 36 – Round 1

The text has been revised as requested.

Comment MK 36 – Round 2

No comment received.

Response MK 36 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 37 – Round 1

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 11. On Page D6-8, second paragraph, it states that increased E.Coli from samples collected in 2006 were attributable to high flows in May-June 2010. Were the samples also collected in 2010 and not 2006? Please revise this sentence. (MDK)

Response MK 37 – Round 1

The sentence was revised to read more clearly. The sentence was saying that samples taken in 2010 experienced an increase in E.Coli bacteria compared to the samples collected in 2006.

Comment MK 37 – Round 2

No comment received.

Response MK 37 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 38 – Round 1

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 12. On Page D6-8, second paragraph, it would be informative to add that, in addition to the SCCD, other entities such as the Big Horn Mine, USGS, and WDEQ/WQD have collected water quality data on the Tongue River and Goose Creek near the proposed mine. It may also be informative to mention that sections of the Tongue River in the vicinity of the proposed mine are on the State's 303(d) list since certain uses are not supported due to impaired water quality. Goose Creek has also been on the 303(d) list in the past and a TMDL has been prepared. Information can be found at: http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/ and http://deq.wyoming.gov/wqd/tmdl/. (MDK)

Response MK 38 – Round 1

The text has been revised as requested. Refer to Section D6.1.5.1.

Comment MK 38 – Round 2

No comment received.

Response MK 38 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 39 – Round 1

Appendix D6-Hydrology, Section D6.1.5.2 Surface Water Quantity, 13. The Big Horn Mine (WDEQ/LQD Permit 213) operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. This station was located approximately ¼ mile upstream from station SM578415-SW-1 that was installed by the Brook Mine. The LQD Hydrology Database contains mean daily flow data from this station from 1982 to 1997, although several years are missing data. Baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic

format upon request or a more complete dataset may be available if requested from the Big Horn Mine. (MDK)

Response MK 39 – Round 1

Please see response to DM 2 and MK 30.

Comment MK 39 – Round 2

Response not accepted. The response referenced Comments DM 2 and MK 30, which refer to Slater Creek, not Hidden Water Creek. The LQD emailed the Hidden Water Creek data to WWC Engineering on July 8, 2015. Please incorporate and discuss the data to strengthen the baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application. (MDK)

Response MK 39 – Round 2

Please refer to the added text at the bottom of the second paragraph of Section D6.1.5.2 summarizing the flow data from the Big Horn Mine Hidden Water Creek former surface water monitoring station, HWC1-79. In addition, Table D6.1-14 has been added which provides the number of flow days per month and the maximum average flow for each day during a given flow month for the 1982 through 1997 period of record. The approximate location of HWC1-79 has been added to Exhibit D6.1-2.

Comment MK 39 – Round 3

Response accepted.

Comment MK 40 – Round 1

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 14. Please briefly discuss in the text the water quality results from Slater Creek in the context of WQD Surface Water Quality Standards for Class 3B waters (see Chapter 1 of WQD Rules and Regulations). This would reveal whether or not designated uses were being met prior to mining. The two samples from Slater Creek indicate no exceedances of Class 3B criteria, indicating uses are supported. (MDK)

Response MK 40 – Round 1

The text has been updated as requested.

Comment MK 40 – Round 2

No comment received.

Response MK 40 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 41 – Round 1

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 15. It is understood that water was not flowing in Hidden Water Creek so the applicant could not collect a sample for baseline purposes. However, as previously mentioned, the Big Horn Mine operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. The LQD Hydrology Database contains nine water quality samples collected at this site from 1979 to 1989. Baseline characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request. (MDK)

Response MK 41 – Round 1

Request for information is pending. No update to the permit has occurred at this time in response to this comment.

Comment MK 41 – Round 2

Response to the comment is pending. As discussed in the review of the response to Comment MK 39, the LQD emailed the Hidden Water Creek data to WWC Engineering on July 8, 2015. Please incorporate and discuss the data to strengthen the baseline water quality characterization of Hidden Water Creek in the Brook Mine permit application. (MDK)

Response MK 41 – Round 2

Please refer to the added text at the bottom of the second paragraph of Section D6.1.5.3 summarizing the surface water quality in Hidden Water Creek for the Big Horn Mine surface water monitoring station, HWC1-79. In addition, Table D6.1-15 has been constructed which displays concentrations of the nine samples collected for the 1979 through 1989 period of record. The approximate location of HWC1-79 has been added to Exhibit D6.1-2.

Comment MK 41 – Round 3

Response accepted.

Comment MK 42 – Round 1

Appendix D6-Hydrology, Section D6.1.5.4 Sediment Transport, 16. This section would be enhanced by including data from a single sediment sample collected on Slater Creek at USGS Station No. 06299900 (peak flow gage previously discussed in Comment No. 4). This sample was collected in June 1967 at a flow of 18 cfs. The TSS was 11,600 mg/L and the suspended sediment discharge was 564 tons/day. (MDK)

Response MK 42 – Round 1

The text has been revised to include the additional sediment sample as requested.

Comment MK 42 – Round 2

No comment received.

Response MK 42 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 43 – Round 1

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 17. A rating curve developed using only the Manning equation will provide only a rough estimate of flows given the uncertainty in the Manning's roughness coefficient. It is recommended that direct discharge measurements also be taken over time to help evaluate the rating curves developed for the four monitoring sites. (MDK)

Response MK 43 – Round 1

The rating curves were developed for ephemeral streams that flow infrequently enough that water measurements cannot be taken at regular intervals. Manning's equation provides a reasonable and widely accepted mathematic approximation of stream flow rates.

Comment MK 43 – Round 2

Response not accepted. Developing a rating curve for an open channel using only Manning's equation and no direct measurements is not a standard practice. If a direct discharge measurement is not occasionally taken, the accuracy of the modelled rating curve will never be known. Please commit to periodically taking a direct measurement to evaluate the rating curves. (MDK)

Response MK 43 – Round 2

A commitment to obtain direct measurements of surface water monitoring stations, when possible, was added to Section MP.7.1.

Comment MK 43 – Round 3

Response not accepted. The text was updated but it is unclear what is going to be directly measured. For example, the text states: *In addition, direct measurements of surveyed cross sections will be obtained when possible.* It is not clear if the measurement will be of the water discharge or the cross section dimensions. Please revise the sentence so it is clear that direct discharge measurements will be taken when possible to evaluate the rating curves.(MDK)

Response MK 43 – Round 3

Section MP.7.1 has been revised to state that direct discharge measurements will be obtained when possible.

Comment MK 44 – Round 1

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 18. Given the uncertainty in the Manning equation, the estimated flow rates provided in Table D6-3 and Attachment D6-5-A (Rating Tables) are reported at much too high a level of precision to be meaningful. Depending on the magnitude of the flow estimate, there should be only one or two significant figures provided. For example, 0.29 cfs = 0.3 cfs and 3,584.38 cfs = 3,600 cfs. Please revise these tables. (MDK)

Response MK 44 – Round 1

Summary Table D6-3 has been revised to engineering precision (no more than three significant figures). The values in Attachment D6-5-A are essentially raw data that are being reported to that magnitude to show the validity of calculations and to aid in curve development. Being raw data, the values were not revised from those previously reported.

Comment MK 44 – Round 2

No comment received.

Response MK 44 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 9 – Round 1

Appendix D6, Section D6.2.1 Regional Hydrogeology, 9. Page D6-12 states, "The potential groundwater in the formation as capable of yielding small quantities of water for domestic and stock use". Please consider providing a range of estimates for well yields based on literature review or from the baseline data collected by the Brook Mine. (MK)

Response Muk 9 – Round 1

The text has been revised to indicate that coal is the only regional shallow aquifer that has a sufficient quantity of water to support domestic and stock use.

Comment Muk 9 – Round 2

No comment received.

Response Muk 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 10 – Round 1

Appendix D6, Section D6.2.1 Regional Hydrogeology, 10. The description in this section discusses only about the Fort Union formation. Please provide a description of

the overlying and underlying water-bearing formations (aquifers) and describe their hydrogeologic characteristics (flow direction, gradients, aquifer properties, general outcrop locations) on a regional context. It is noted that some of the overlying formations may be dry or discontinuous within the mine permit boundary. (MK)

Response Muk 10 – Round 1

Section D6.2.1 has been updated as requested.

Comment Muk 10 – Round 2

No comment received.

Response Muk 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 11 – Round 1

Appendix D6, Section D6.2.1 Regional Hydrogeology, 11. Page D6-12 states, "The overburden is comprised of sand lenses, clinker and alluvial that have the potential of water bearing bodies. Due to the topography in this area, the valley cut through these deposits. Therefore, they are discontinuous and would not hold large quantities of water." It is noted that they are discontinuous and would not hold large quantities of water. Please provide additional justification for this statement by using the hydrogeologic data collected by the Brook Mine including any reference to the interpreted extent of dry zones based on drill holes, monitor wells and other applicable data. (MK)

Response Muk 11 – Round 1

Section D6.2.1.1 has been updated as requested.

Comment Muk 11 – Round 2

Response not accepted. In addition to a reference to Addendum D5-2, please provide a description/interpretation on the aerial and vertical extent of dry zones. (MK)

Response Muk 11 – Round 2

Discussion of the interpreted dry zones was added to the first paragraph of Section D6.2.1.1 (page D6-14). As discussed, the overburden is primarily dry as indicated by the lithologic logs in Appendix D5. A few boreholes did indicate the presence of water in the overburden; however, water was generally located in the shallow alluvium/colluvium material or in burn areas. These boreholes were generally located near streams or supporting tributaries throughout the permit area and adjacent areas.

Comment MuK 11 – Round 3

Response accepted.

Comment Muk 12 – Round 1

Appendix D6, Section D6.2.1 Regional Hydrogeology, 12. Please clarify if there were groundwater springs or seeps observed in the areas within or adjacent to the mine permit boundary. Include a discussion (or reference) on the surface water - groundwater interactions.(MK)

Response Muk 12 – Round 1

Section D6.2.2.5 has been updated as requested.

Comment Muk 12 – Round 2

No comment received.

Response Muk 12 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 13 – Round 1

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 13. Page D6-13 states, "No monitoring wells were completed in the overburden or interburden as no water was found in these units during drilling operations". This information is critical in demonstrating the overlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (both overburden and interburden) and their depths that were used to make this determination. (MK)

Response Muk 13 – Round 1

Section D6.2.2.1 has been updated as requested.

Comment Muk 13 – Round 2

No comment received.

Response Muk 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 14 – Round 1

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 14. Page D6-13 states, "Also one well 578409-MST-UB showed the presence of water in the underburden, while all the other wells drilled into the

underburden were dry and therefore not completed as wells." Similar to the previous comment, this information is critical in demonstrating the underlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (underburden) and their depths that were used to make this determination. (MK)

Response Muk 14 – Round 1

Please see response to Muk 13.

Comment Muk 14 – Round 2

No comment received.

Response Muk 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 15 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 15. Page D6-15 states, "Alluvial materials were also not analyzed during the aquifer testing." The alluvial aquifer materials are one of the key factors in determining any impacts caused by mining to the alluvial aquifer. Alluvial aquifer tests will be helpful in understanding any surface water – groundwater interactions. Please provide justification for not conducting any aquifer tests in the alluvial wells. (MK)

Response Muk 15 – Round 1

The text in Section D6.2.2.2 has been updated.

Comment MuK 15 – Round 2

Response not accepted. The updated text just notes that there were three alluvial wells completed in Slater Creek. The original comment remains to be addressed. (MK)

Response MuK 15 – Round 2

A short discussion was added to the second paragraph of Section D6.2.2.2 after the context of the response to Comment MuK 16. The discussion explains that aquifer tests weren't conducted in the alluvial wells because of the confining claystone intervals between colluvial/alluvial material and the differences in potentiometric head between the Carney coal and the colluvial/alluvial material. Therefore, it can be surmised that the confining intervals will provide a suitable barrier between the mining activities and the colluvium/alluvium, not necessitating aquifer tests in the alluvial aquifer.

Comment MuK 15 – Round 3

Response not accepted. It is acknowledged that there is a potentiometric head difference between alluvium and Carney coal seam. Please clarify if this potentiometric head difference is an artifact caused by CBM dewatering. (MK)

Response MuK 15 – Round 3

It is unlikely that the potentiometric head difference between the alluvium and the Carney coal seam can be attributed to CBNG dewatering. The CBNG dewatering efforts have occurred approximately 2 miles away from the wells utilized for aquifer testing. Given the relatively low transmissivity of the coal it is unlikely that the CBNG dewatering efforts have significantly affected water levels in the wells utilized for the aquifer tests. The water levels measured in the Carney coal during the aquifer test demonstrate that the Carney coal is confined (see Addendum D6-8). If the drawdowns from CBNG dewatering were significant it is unlikely that the coal aquifer would still be confined. Discussion of the potentiometric head differences between alluvium and Carney coal as it relates to CBNG dewatering has been added to the end of the second paragraph in Section D6.2.2.2.

Comment MuK 16 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 16. Please provide justification for not observing the groundwater level responses in the alluvial aquifer during the two aquifer tests conducted by Brook mine. (MK)

Response MuK 16 – Round 1

No alluvial material was present in immediate vicinity of the clusters used for the pumping tests, hence there was no alluvial aquifer to monitor. Hidden Water Creek located to the east of the tested well cluster would be potentially the nearest location of alluvial material. However, as noted in Appendix D11, the fill material in Hidden Water Creek is more colluvial than alluvial.

In addition, as shown on the well completion summary logs in Addendum D6-7, multiple claystone intervals are located between the Carney Coal and the surface at the well cluster where the pumping tests were conducted. The top of the Carney Coal is approximately 90 feet below ground surface at the cluster well location which is approximately 50 feet below the level of any colluvial/alluvial deposits in Hidden Water Creek. Similarly, the potentiometric head in the Carney coal is some 50 feet below the level of the colluvial/alluvial deposits in Hidden Water Creek and if there were a direct hydraulic connection, there would be no water in the Hidden Water Creek colluvium/alluvium. Given the confining intervals between and the significant difference in potentiometric head between the Carney Coal and the Hidden Water Creek colluvium/alluvium, additional shallow monitoring above the Carney Coal was not necessary.

Comment Muk 16 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Response Muk 16 – Round 2

The context of the response was added to the second paragraph of Section D6.2.2.2.

Comment MuK 16 – Round 3

Response accepted.

Comment Muk 17 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 17. Page D6-16 states, "A report of these tests can be found in Addendum D6-8 and summary tabulation of the aquifer test results is included in Table D6.2.2". Please consider including a comparison of these estimated aquifer properties with the aquifer tests conducted in other similar coal seams in the Powder River Basin (Example: Bighorn Mine). Given the number of tests conducted by the mine, this will increase the robustness of the reported estimates from the two aquifer tests. (MK)

Response Muk 17 – Round 1

As requested aquifer test results from Big Horn Coal Company and from the Youngs Creek Mine were added to the text.

Comment Muk 17 – Round 2

No comment received.

Response Muk 17 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 18 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, It is noted that the aquifer tests were conducted for ~640 minutes. Will an increased aquifer test duration change the observed lack of interaction between the coal seams and the underburden? Please clarify with a brief description. (MK)

Response Muk 18 – Round 1

Given the head differences between the static water levels in the Carney Coal, Masters Coal, and the underburden it is unlikely that additional pumping would have resulted in any impacts to the water levels in the underburden. As shown on Table D6-2, (page Addendum D6-8-13) the initial water level in the Carney Coal was approximately 11.5 feet higher than the water level in the Masters Coal and the initial water level in the

Masters Coal was approximately 9 feet higher than the initial water level in the underburden well. If there were a hydrologic connection between the aquifers, it is likely that the water levels in the aquifers would have already come into equilibrium.

Comment Muk 18 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Response Muk 18 – Round 2

The context of the response has been added as the third paragraph of Section D6-8.3.2.3 of Addendum D6-8 "Pumping Test Report." The context of the response seems to be better suited in the Pumping Test Report than in Section D6.2.2.2 of Appendix D6.

Comment MuK 18 – Round 3

Response accepted.

Comment Muk 19 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 19. The referenced Addendum D6-8, Table D6-2 shows an increase in water levels in two of the Carney coal seam observation wells during the Masters coal seam well pumping test. Please provide an explanation for this increase in water levels during the aquifer test. (Noordbergum effect?). (MK)

Response Muk 19 – Round 1

Upon review of the raw data collected during the pumping test it was noted that the drawdowns reported in Tables D6-2 and D6-3 were incorrectly reported. Replacement tables are included with this round of comment responses. As shown on the updated version of Table D6-2, the water level in both Carney observation wells (CRN-1 and CRN-OB) increased by 0.23 feet during the Masters coal pumping test. While the Noordbergum effect or other natural phenomena such as earth tides could have potentially influenced the water levels in adjacent aquifers during the pumping test, the increase in water levels can be largely attributed to barometric pressure changes. Water levels in the Carney observation wells were monitored using hand held electric lines and there were no adjustments for barometric pressure reported in Table D6-2. No site specific barometric data was collected during the pumping test period. However, to evaluate how barometric pressure changes may have impacted water levels in the wells, barometric data from the automatic weather observing station (AWOS) at the Sheridan County airport was obtained from the National Oceanic and Atmospheric Administration (NOAA) database. Barometric data from the Sheridan County Airport AWOS site was compared to water level measurements in Attachment D6-8-K. The data in Attachment D6-8-K demonstrates a clear correlation between barometric pressure and water level variations in the Carney coal monitor wells during

the Masters coal pumping test. Generally over the course of the Masters coal pumping test the barometric pressure went down (roughly 0.31 feet). A decrease in the barometric pressure is expected to result in an increase in water levels in a confined aquifer like the Carney coal aquifer which is what was observed.

Similar increases in water levels were also noted in the Masters Coal observation wells (MST-1 and MST-OB) during the Carney pumping test as noted on Table D6-3. Attachment D6-8-K demonstrates a clear correlation between decreasing barometric pressure and rising water levels in the Masters coal observation wells during the Carney Pumping test. In addition, during the Carney coal pumping test, water levels in the Masters coal observation wells were still recovering from drawdowns induced during the Masters coal pumping test which may also have contributed to rising water levels in the Masters coal. The increase in water level measured in the Masters coal observation wells is attributed to a combination of continuing water level recovery and barometric effects.

Only very minor water level variations in the Masters underburden well (MST-UB) were noted during both pumping tests. As shown on the well completion form in Addendum D6-7, (Page D6-7-8) MST-UB was completed in an interval that was predominately claystone and the estimated yield is less than 2 gpm. Essentially the strata in which MST-UB is completed is more of an aquitard than an aquifer. As a result, it takes a lot longer for the water levels in the well to adjust to changing atmospheric pressure because water does not enter or discharge from the formation very fast. The lack of barometric responses in the MST-UB are attributed to the fact that the low yielding aquitard in which the well is completed has a lower barometric efficiency than the wells completed in the coal aquifers.

Vented transducers utilized to monitor water levels in the both the pumping and adjacent monitor wells during each pumping test, automatically compensated for the barometric pressure effects. Therefore, barometric pressure effects did not affect the aquifer analyses that were developed based on the pumping test data.

Comment Muk 19 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Response Muk 19 – Round 2

The context of the response has been added to Section D6-8.3.2.3 of Addendum D6-8 "Pumping Test Report." The context of the response seemed to be better suited within the Pumping Test Report than Section D6.2.2.2 of Appendix D6.

Comment MuK 19 – Round 3

Response accepted.

Comment Muk 20 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 20. Please provide a discussion (or reference) on the role of faults in the results of aquifer tests. (MK)

Response Muk 20 – Round 1

As noted in Addendum D6-8, (page D6-8-9) no hydrologic boundary conditions were observed in the pumping test data. As can be seen on Exhibit D6.2-2, the 578409 well cluster is located approximately 2,100 feet south and east of the nearest mapped fault. Since neither the Carney nor the Masters coal seams are very robust aquifers and have low transmissivity values, it is not surprising that the fault would not influence the pumping test results. For example, using Theis drawdown equations and the aquifer characteristics measured in the Masters coal (transmissivity of 3.2 ft^2/day, storativity of 0.00025, and a pumping rate of 0.5 gpm) it is estimated that it would take over 70 days of continuous pumping for a water level response greater than 0.5ft to be observed 2,000 feet away. Therefore the likelihood that the faults would have influenced the pumping test results is very low.

Comment Muk 20 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Response Muk 20 – Round 2

The context of the response has been added to Section D6-8.4 of Addendum D6-8 "Pumping Test Report." This seemed like a more appropriate location for the context of the response than within Section D6.2.2.2 of Appendix D6.

Comment MuK 20 – Round 3

Response accepted.

Comment Muk 21 – Round 1

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 21. Please provide some additional discussion on the premining potentiometric surface maps, including ranges of estimated hydraulic gradients and groundwater velocity in the different coal seams/aquifers. (MK)

Response Muk 21 – Round 1

As requested, additional discussion on the hydraulic gradients and groundwater velocity in the coal seams were added to Section D6.2.2.4.

Comment Muk 21 – Round 2

Response not accepted. The revised text states, "Groundwater gradients are low ranging from approximately 2 – 4 ft/year in the Masters Coal and 1 to 2.5 ft/year in the Carney Coal." Please correct the sentence to reflect velocities. (MK)

Response Muk 21 – Round 2

The text in Section D6.2.2.4, second paragraph was revised to correctly refer to 2 to 4 ft/year and 1 to 2.5 ft/ year as velocities rather than gradients.

Comment MuK 21 – Round 3

Response accepted.

Comment Muk 22 – Round 1

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 22. Please provide a discussion (or reference) on the hydrologic effects of any adjacent operations (including past coal mining activity by historic mines and Bighorn mine) on the premining information and data. (MK)

Response Muk 22 – Round 1

The last paragraph in Section D6.2.2.4 describes how CBNG production has affected water levels in the eastern side of the permit area. The drawdowns resulting from CBNG production have occurred since any historic coal mining activity and have superseded any drawdowns that may have occurred due to historic mining. Therefore, no lingering hydrologic effects from past coal mining activities are present. The text in the last paragraph in Section D6.2.2.4 has been updated to describe how CBNG impacts have superseded any impacts from historic coal mining activities.

Comment Muk 22 – Round 2

No comment received.

Response Muk 22 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 23 – Round 1

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 23. This section provides a good discussion on the recharge areas. However, please clarify if there are any discharges from the coal seams within the permit boundary. (MK)

Response Muk 23 – Round 1

Within the permit boundary there are no discharges from the coal seams with the possible exception of the Carney coal on the far west side of the permit area. As shown on Exhibit D6.2-3, the Carney coal outcrops in the far western side of the permit area along the ridge tops but has been eroded away in the stream valleys. As a result, the Carney coal is perched with no real source of recharge and is generally dry. However, on the down dip side of the outcrop the coal may discharge within the permit if there is water in the coal seam to discharge. As shown on Figures MP-3-4.7-1 and MP-3-4.7-2 it was determined during the groundwater modeling efforts that most of the Carney coal within the far western side of the permit area was dry. Therefore, there is minimal (if any) discharge from the Carney coal within the permit area. Section D6.2.2.5 has been updated to clarify where discharges from coal seams may occur within the permit boundary.

Comment Muk 23 – Round 2

No comment received.

Response Muk 23 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 24 – Round 1

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 24. Please provide a range of estimates for recharge from precipitation to the aquifers within the permit boundary. Also, provide a discussion if this is the primary recharge mechanism for the aquifers within the permit boundary. (MK)

Response Muk 24 – Round 1

The estimated recharge rates from precipitation are summarized in Section 4.2.2 of Addendum MP-3. Addendum MP-3 describes recharge within the permit area in more detail than Section D6.2.2.5. A reference to MP-3 was added in Section D6.2.2.5.

Comment Muk 24 – Round 2

No comment received.

Response Muk 24 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 25 – Round 1

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 25. Consider providing a description of the soil properties within the permit boundary and the use of these percent soil distributions in the discussion of infiltration within the permit boundary. (MK)

Response Muk 25 – Round 1

The soil properties within the permit boundary are described in detail within Appendix D7. While different soil types are expected to have variable infiltration rates, the only infiltration rate that is significant for the coal aquifers is the infiltration rate assigned to the strata near the outcrop of the coal seams. Throughout the permit area the strata overlying the coal aquifer are generally dry. Therefore the primary source of recharge occurs at the outcrops. Scoria, in particular, plays a significant role in recharge of the coal seams because it usually occurs near the coal outcrop. Because of its highly permeable characteristics most of the precipitation that falls on the scoria infiltrates into the scoria where it either infiltrates into the coal or discharges along a seep line at the base of the scoria. As noted in the response to BJ Kristiansen's comment number 57, ash material between the base of the scoria and the coal seams sometimes limits how much of the water in the scoria actually comes into direct contact with the coal. Nevertheless, because a large percentage of precipitation falling on the scoria actually infiltrates into it, the scoria does provide a consistent water source for recharge into the coal outcrops. As noted in Addendum MP-3 Section 4.2.2 the scoria areas were delineated and assigned their own recharge zone because they do play a significant role in recharging the coal seams. Within the permit area, there are several locations where the coal seams outcrop as well. These outcrop areas were also assigned their own recharge zone because they also have a hydrologic connection to the coals. Since the strata overlying the coal seams to be mined in the Brook Mine are generally dry, the recharge component from the overburden to the coal is very low away from the outcrop areas. Because of the limited hydrologic interaction between the recharge at the surface and the coal in areas away from the outcrop, site specific changes in the recharge rates based on soil type will not impact the coal aquifers. For this reason additional analysis of the infiltration properties of the soils within the permit area represents a level of detail that is not necessary to describe the hydrologic impacts to the coal aquifers from the proposed mining operations.

Comment Muk 25 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application to document the justification for not including additional analysis on infiltration. (MK)

Response Muk 25 – Round 2

The context of the response has been added as the second paragraph of Section D6.2.2.5 of Appendix D6.

Comment MuK 25 – Round 3

Response accepted.

Comment Muk 26 – Round 1

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 26. Page D6-18 states, "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-8". Please revise this statement to reference the correct addendum - Addendum D6-9. (MK)

Response Muk 26 – Round 1

The text has been updated to read "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-9".

Comment Muk 26 – Round 2

No comment received.

Response Muk 26 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 27 – Round 1

Appendix D6, Section D6.2.3 Baseline Water Quality, 27. Page D6-20 states, "A piper diagram of the groundwater wells with measured values is presented in Figure D6.2-1. Please provide a discussion on the water quality types observed at each aquifer (Example: Is the water quality type variable within an aquifer? If yes, explain the potential reasons for this observed variability) based on the piper diagram. (MK)

Response Muk 27 – Round 1

Section D6.2.3 has been updated as requested.

Comment Muk 27 – Round 2

No comment received.

Response Muk 27 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 28 – Round 1

Appendix D6, Section D6.2.3 Baseline Water Quality, 28. Page D6-20 states, "The constituents that most frequently exceed the standard concentration limitations are ammonia, TDS, sulfate and manganese". Please clarify if these constituents exceed the Chapter 8 standards at *all* the monitor wells. (MK)

Response Muk 28 – Round 1

Please refer to the Tables D6.2-8 thru D6.2-17 for exceedances of water quality based on Chapter 8 standards. Based on the tables, the concentrations are not exceeded at all monitor wells. No text edits were made in response to this comment.

Comment Muk 28 – Round 2

No comment received.

Response Muk 28 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 29 – Round 1

Appendix D6, Section D6.2.4 Groundwater Rights, 29. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Cheyenne copy of the TFN does not have a sheet separator and a tab for Appendix E2 in the Adjudication volume. Please provide a sheet separator and tab for Appendix E2. (MK)

Response Muk 29 – Round 1

Refer to Comment DM3. Groundwater rights are provided in Appendix B of the Adjudication Volume. This text edit has been made in Section D6.2.4.

Comment Muk 29 – Round 2

Response not accepted. The response indicates Appendix B and the updated text indicated Appendix B2. Please clarify if that is Appendix B or Appendix B2. (MK)

Response Muk 29 – Round 2

The text in Section D6.2.4 was corrected to reference Appendix B as opposed to Appendix B2.

Comment MuK 29 – Round 3

Response accepted.

Comment Muk 30 – Round 1

Appendix D6, Section D6.2.4 Groundwater Rights, 30. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Please provide a summary discussion/statistics on (i) total number of water rights, (ii) number of wells, (iii) aquifer, (iv) permitted water use and other relevant summary statistics. (MK)

Response Muk 30 – Round 1

Groundwater rights are listed in Appendix B of the Adjudication Volume. All of the aforementioned information is listed for each water right. Due to the constantly changing nature of water rights, a summary table is difficult to construct, and due to summary statistics not being required by WDEQ regulation, a summary statistics table has not been prepared.

Comment Muk 30 – Round 2

Response not accepted. It is acknowledged and noted that water rights vary with time. The intent of this comment is to request a summary of the raw data on the water rights presented in Appendix B, which is a snapshot in time before the approval of the proposed operations. It will enable the reviewers to get a clear understanding of the existing groundwater water uses and if there is a significant dependence on the affected aquifers. In addition, it is very useful information for the CHIA to provide a summary on the groundwater hydrologic concerns within the impact area. Please summarize (i) total number of water rights, (ii) number of wells (iii) wells grouped by aquifer and (iv) permitted water use. Example: Sum the total number of wells, provide a description on the percent of different types of uses. (MK)

Response Muk 30 – Round 2

A summary table (Table D6.2-18) has been added to Appendix D6. Text referencing this table has been added to Section D6.2.4, as well as text referencing discussion of impacted wells found in Addendum MP-3. Table D6.2-18 summarizes the total number wells not including cancelled, expired, abandoned, or suspended water rights. The table lists the permitted water use, the number of wells for each permitted water use, and the percent of total for each permitted use category. The table does not group the wells by aquifer. With nearly 500 wells being reported, the research required to determine the aquifer that each well is completed in would be exhaustive and, ultimately, not possible. Additionally, upon review of several of these water rights, one will note that most water rights have poor completion information. Water rights have either no lithology or have lithology that is so nondescript that a specific aquifer cannot be determined.

Comment MuK 30 – Round 3

Response accepted.

Comment Muk 31 – Round 1

Appendix D6, Section D6.2.4 Groundwater Rights, 31. Please provide a discussion (or reference) on the premine groundwater use (including the uses reported to SEO) within the permit boundary and the adjacent areas. (MK)

Response Muk 31 – Round 1

The premine groundwater uses as reported to the SEO within the permit boundary and the adjacent 3 miles are listed with each individual water right in Appendix B of the Adjudication Volume.

Comment Muk 31 – Round 2

Response not accepted. In addition to the reference to Appendix B, please include a textual description and summary of the premine groundwater use within the permit boundary and adjacent areas. (MK)

Response Muk 31 – Round 2

The text in Section D6.2.4 has been changed to include a discussion listing the predominant water uses in permit area and the adjacent 3-mile buffer. The text references the newly created Table D6.2-18 for a groundwater use summary.

Comment MuK 31 – Round 3

Response accepted.

Appendix D7

Comment DS 6 – Round 1

Appendix D7, Exhibit D7.3.-1 was compared with Exhibit MP.1-1. As required, it appears that the soil sampling was concentrated in areas where surface disturbance is to be expected. Please provide the contour interval on the soils map. For ease of review and to prevent misinterpretation, however, the map showing sampling locations should also clearly show the locations of proposed surface disturbances instead of providing these details on separate maps which may or may not present differing scale distances.

Response DS 6 – Round 1

The disturbance boundary can be found on Figure D7.1-1 and as the reviewer noted on Exhibit MP.1-1. No revision to exhibit D7.3-1 has occurred in response to this comment.

Comment DS 6 – Round 2

Response is not adequate. Please show the proposed surface disturbance locations on Exhibit D7.3.-1.

Response DS 6 – Round 2

Please refer to Comment DS 22 of the Mine Plan. Soil polygons have been added to Exhibit MP.4-2 integrating the disturbance boundary with the associated soil polygons. No revision to Exhibit D7.3-1 has occurred in response to this comment.

The reasoning behind this is to separate Mine Plan disturbance from baseline studies. It is RAMACO's opinion that baseline studies should only show those conditions prior to RAMACO's proposed operations. Additionally, when future revisions to the Mine Plan are potentially made, references to the Mine Plan in baseline studies could inadvertently be missed causing mistakes in the permit. However, RAMACO is open to showing baseline information within the Mine Plan for an easier evaluation of topsoil types stripped within the topsoil stripping areas.

Comment DS 6 – Round 3

No comment received.

Response DS 6 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 7 – Round 1

Appendix D7, Page D7-4. The second paragraph of this page contains text that should be deleted. It states "If for whatever reason overall sampling intensity…..was determined to not be enough, it is proposed that any additional sampling be deferred and included a stipulation of a future pre-stripping soil assessment program." The Mine Plan and Reclamation Plan soils handling and replacement is contingent on adequate baseline sampling of the proposed area that will be affected by mining operations (topsoil balance and stockpile location planning and bond calculation). Therefore, baseline sampling for soils must be adequate prior to approval of any permit application. Please remove the inappropriate language from the Appendix D7 text. If future changes to the Mine Plan require additional soil sampling the issue will be addressed at that time.

Response DS 7 – Round 1

As requested, the second sentence of the second paragraph on page D7-4 has been deleted.

Comment DS 7 – Round 2

No comment received.

Response DS 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 8 – Round 1

Appendix D7, Page D7-9. Text appears in this section that upon NRCS declaration of prime farmlands occurring in the permit area, a letter will be provided to the DEQ. A letter from the NRCS has been received and inserted in the permit declaring no prime farmlands to exist. The text, therefore, is not appropriate and should be removed.

Response DS 8 – Round 1

As requested, the sentence about prime farmland (the last sentence of the first full paragraph on page D7-9) has been deleted. A new reference, citing the letter received on October 31, 2015 (negative determination of prime farmland on Ramaco permit area) has been inserted on page D7-9 and the new reference has been added to the list of references on page D7-33.

Comment DS 8 – Round 2

No comment received.

Response DS 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 9 – Round 1

Appendix D7, WS § 35-11-415(b)(iii) and the Coal Rules, Chapter 4, Section (c)(ix) state that if topsoil is virtually nonexistent or is not capable of sustaining vegetation then subsoil or a selected spoil material may be used as a topsoil or subsoil supplement. Additionally, due to the proximity of this mine to the Tongue River, a Class 2AB stream, limits for chemical contaminants will be imposed on discharges from the permit. Therefore, for areas where unsuitable or marginal topsoil chemistry is located (e.g. Wibaux channery loam, sample R13), an alternative soil replacement material should be identified and used in reclamation. Such a commitment must also be provided in the Mine Plan and Reclamation Plan to provide evidence that such issues that could affect the condition of reclamation and/or lead to off-site impacts will be addressed.

Response DS 9 – Round 1

No "alternate soil replacement material" is necessary for areas of Wibaux channery loam (Map Unit Wx). The lower soil material below 8 inches of Wibaux (any "C" horizon soil substratum below 8 inches, where existent) was not recommended for salvage and would be grouped with the overburden spoil for placement purposes. This lower material had an excessive volume of hard coarse fragments (>35%) and, based on one of the three Wibaux sample sites (R13), an "unsuitable" EC and SAR value for the 8 to 15 inch depth, EC=12.8 and SAR=17.3. Two new sentences, indicating no soil salvage of Wibaux below 8 inches in depth, has been added to the soils report on page D7-26, one sentence each for Map Unit Wx and Map Unit Wx-RO. Furthermore, the amount of suitable soil available for salvage across the entire proposed disturbance area is not limiting, with a calculated weight-average of 20.2 inches. Therefore, additional "alternate soil replacement material" is not necessary.

Comment DS 9 – Round 2

No comment received.

Response DS 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 10 – Round 1

Appendix D7, The description of Map Unit G (Bauxson Loam, sample R-19) does not show marginal selenium that occurs between 22 – 48 inch depth range which could affect the salvage depth and may require special handling of the marginally suitable subsoil.

Response DS 10 – Round 1

Two new sentences have been added to the last paragraph on page D7-21 stating the presence of "marginal" rated Selenium values for lower material of Bauxson loam (Map Unit G) sample site R19. Strictly speaking, "marginal" rated soil material is not "unsuitable" and does not need to be specially handled. This lower Bauxson material has been recommended for salvage as "Subsoil", not "Topsoil'.

Comment DS 10 – Round 2

No comment received.

Response DS 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 31 – Round 2 (New Comment)

Section D7-2, Page D7-3 – A quotation and reference related to Schellinger, 2014, must be removed from the permit document as must all other quotations not supported by LQD documentation.

Response DS 31 – Round 2 (New Comment)

This quotation and reference is supported by LQD documentation. Please refer to Exhibit D7.2-1 of Appendix D7 which is a memorandum authored by David Schellinger, Soils Specialist on June 14, 2014. The quotation on page D7-3 accurately represents the sentence in the memorandum. Therefore, the quotation and reference remain in Appendix D7 as evidence for the extent of soil sampling in the Brook Mine permit area.

Comment DS 31 – Round 3 (New Comment)

Response is not adequate. The LQD Administrator has determined that LQD staff quotations not directly attributed to peer reviewed documents or documents signed by LQD staff should not be used in the text of permit documents; the quotes have no standing. The quotation of Mr. Schellinger, 2014, related to the survey required on affected areas where surface excavation would not occur must be removed.

Response DS 31 – Round 3 (New Comment)

The author of the citation has been revised to Wyoming Department of Environmental Quality (WDEQ-LQD). 2014b. However, the quotations and reference for the Memorandum to File remain in the text. As previously stated the quotation accurately represents the sentence in the memorandum as evidence for the extent of soil sampling in the Brook Mine permit area therefore the quotations will remain.

Appendix D8

Comment JJ 1 – Round 1

Appendix D8, 1. Please update the permit boundaries so that they are the same on Exhibit D8. 2-1 and Addendum D8 Map 1. I note specifically that lands should not be included within the permit boundary south of the interstate and that Section 10 TWN57N RNG85W displays different boundaries along the far west edge of the permit; it appears that the section lines are skewed between the two maps. The Addendum D8 Map 1 also is missing a sizeable amount of lands located in Section 21 TWN54N RNG84W which are included within the permit boundary of the Adjudication Exhibit 1 map. While comparing the maps I find that the maps display the same information in slightly different formats, please explain the necessity for two individual maps and at a minimum make them consistent against one another.

Response JJ 1 – Round 1

Baseline vegetation assessment maps have been updated to include the correct permit boundary. The discrepancy in the permit boundary is attributed to the difference in graphical representation between a USGS quad system and a PLSS system. The USGS quad system is now depicted. Exhibit D8.2-1 is a summary map for this Appendix and future updates made to this Appendix. This map will change throughout the life of the mine as future changes are incorporated. Addendum D8 Map 1 is for this Addendum and will not change throughout the life of the mine.

Comment JJ 1 – Round 2

The response is acceptable. The DEQ now understands the two separate maps and the boundaries now match.

Response JJ 1 – Round 2

Round 1 response is adequate. No response is necessary.

Comment JJ 2 – Round 1

Appendix D8, 2. Why does the study area not include all lands within the proposed permit boundary?

Response JJ 2 – Round 1

Portions of the proposed Brook Mine permit area not included within the study area were added during an October 2014 permit boundary change following completion of the baseline vegetation study. Additional studies were not conducted in these areas due to the limited size and similarity to areas within the study area. Section D8-1.1, page D8-1-5 text has been updated to explain the exclusion of these areas.

Comment JJ 2 – Round 2

The DEQ rules and regulations require vegetative characterization and baseline data for the entire permit area. Therefore, the lands located in Section 21, 22, and 15 that had not been previously included in the 2013 vegetation study area will require further attention. Please contact the DEQ to discuss the required baseline vegetation surveys. Due to the nature of the missing baseline vegetation data more comments may occur once all the data is submitted and applicable tables are updated.

Response JJ 2 – Round 2

The lands that are located in Sections 21, 22, and 15 that were not previously sampled in 2013 were sampled during 2015 quantitative baseline vegetation fieldwork. The data gathered for the areas in the above listed sections will be summarized for the WDEQ when the vegetation report is completed. The study area also needs to be

updated on both Exhibit D8.2-1 and Addendum D8 Map 1, and will be provided to WDEQ in a supplemental submittal.

Comment JJ 2 – Round 3

Comment remains open until the data is provided and reviewed.

Response JJ 2 – Round 3

Addendum D8-1 text and Addendum D8-1 Table D8-2 have been revised to include the additional areas for the Brook Mine Study Area. Exhibit D8.2-1 and Addendum D8-1 Map 1 have been revised to include the updated Brook Mine Study Area boundary.

Comment JJ 3 – Round 1

Appendix D8, 3. The acreage displayed on Table D8.2-1 should equal that of the land permitted on the Form 11. The Form 11 displays 4,548.8 acres while the table shows 4,581.7 acres a difference of 32.9 acres. Please update either the Form 11 or Table D8.2-1 to show the true permit acreage as it relates to the vegetation communities. Upon further review I find that Table D8-2 located on page Addendum D8-1-41 exhibits the proper acreages in relation to the Form 11, thus the values represented there may be more accurately displayed in Table D8.2-1.

Response JJ 3 – Round 1

Total acreage of the permit area is 4,548.8 acres as illustrated in Form 11 and Table D8-2. Table D8.2-1 has been updated to reflect the correct acreage.

Comment JJ 3 – Round 2

The response is acceptable.

Response JJ 3 – Round 2

Round 1 response is adequate. No response is necessary.

Comment JJ 4 – Round 1

Appendix D8, 4. Table D8.2-1 states there are 56 acres of agricultural lands; however, I am unable to locate Agricultural lands north of the interstate. Please, discuss and edit the values to display true acreages in relation to the proposed permit boundary. (See comment 3 for more clarification and another table for utilization to update values.)

Response JJ 4 – Round 1

Agricultural Lands within the permit area total 4.5 acres and are located in Section 21 TWN54N RNG84W. Table D8.2-1 has been updated to reflect the correct acreage of Agricultural Lands and other vegetation communities within the permit boundary.

Comment JJ 4 – Round 2

The response is acceptable.

Response JJ 4 – Round 2

Round 1 response is adequate. No response is necessary.

Comment SP 3 – Round 1

Appendix D-8 Vegetation Baseline, Page D8-3. Section D8.1.7. Guideline 2 is a non coal guideline. Please revise this sentence to reference the equation shown in Section D8-1.2.9 Sample Adequacy.

Response SP 3 – Round 1

Changed as requested. Additionally, Appendix D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8.1.1, page D8-1 and Section D8.3, page D8-4. Addendum D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8-1.2, page D8-1-5 and Section D8-1.9, page D8-1-38. Reference to Guideline 2 was removed from Section D8-1.2.9, page D8-1-12.

Comment SP 3 – Round 2

No comment received.

Response SP 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 3 – Round 3

The response is satisfactory. The references to Guideline 2 have been removed.

Comment SP 4 – Round 1

Appendix D-8 Vegetation Baseline, Page D8-4. Section D8.1.8. Please revise the second sentence to, "The EXREFA is all of the unaffected area for each native vegetation community."

Response SP 4 – Round 1

Changed as requested.

Comment SP 4 – Round 2

No comment received.

Response SP 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 4 – Round 3

The response is satisfactory. The term EXREFA has been incorporated.

Comment SP 5 – Round 1

Appendix D-8 Vegetation Baseline, Page D8-1-8. Section D8-1.2.4. The last sentence in this section states that no sample locations occurred within the Brook Mine Permit Area. AG-13, 14, 17 and 25 are shown on Addendum: D8, Map 1 inside the permit area. Please correct this statement or the permit boundary on the Map.

Response SP 5 – Round 1

Baseline vegetation assessment maps have been updated to include correct permit boundary which illustrates AG-13, 14,17, and 25 are not located within the permit boundary.

Comment SP 5 – Round 2

No comment received.

Response SP 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 5 – Round 3

The response is satisfactory. The permit boundary has been corrected so that no Agricultural transects fell within the permit boundary.

Comment SP 6 – Round 1

Appendix D-8 Vegetation Baseline, Page D8-1-11. Section D8-1.2.8. The last sentence of the first paragraph should be revised to, "Sample adequacy was not required for species diversity and composition."

Response SP 6 – Round 1

Changed as requested.

Comment SP 6 – Round 2

No comment received.

Response SP 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 6 – Round 3

The response is satisfactory. A sentence on sample adequacy for species diversity and composition has been revised.

Appendix D9

Comment DM 4 – Round 1

Appendix D9-Wildlife, Page D9-3 states that when a sage grouse confirmation letter is provided by WG&F, it will be provided to DEQ. It appears that the confirmation letter is already part of the package (Page D9-E3). Please reference the location of the letter.

Response DM 4 – Round 1

Page D9-3 was revised to reference Page D9-E3 as the location of the letter.

Comment DM 4 – Round 2

No comment received.

Response DM 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment WGF 1 – Round 1

(Appendix D9), We recommend this report become part of the annual reporting which will ensue throughout the operation of the mine.

Response WGF 1 – Round 1

Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the sections of the Mine Plan where the annual wildlife report commitments are contained.

Comment WGF 1 – Round 2

No comment received.

Response WGF 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment WGF 2 – Round 1

(Appendix D9), We suggest coordinating with the USFWS regarding raptor mitigation as needed through the mining process.

Response WGF 2 – Round 1

The commitments to coordinate with the USFWS regarding raptors as well as T&E and other species of federal concern are provided in Section MP.18, Addendum MP-8 and Addendum MP-9 of the Mine Plan. Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references these discussions.

Comment WGF 2 – Round 2

No comment received.

Response WGF 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment WGF 3 – Round 1

(Appendix D9), We recommend mining reclamation practices consider providing suitable habitat for existing wildlife within the specifications required by DEQ-LQD.

Response WGF 3 – Round 1

The commitments to reclaim wildlife habitats are provided in the Reclamation Plan in Section RP.7 Wildlife Restoration. Discussion was added at the end of Addendum D9 - 1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the Reclamation Plan.

Comment WGF 3 – Round 2

No comment received.

Response WGF 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Appendix D10

Comment BJ 63 – Round 1

EXHIBITS, Addendum D10, The permit boundary layer on all of the exhibits covering the aquatic resource boundaries is incorrect. Please correct the permit boundary layers.

Response BJ 63 – Round 1

Aquatic resource inventory maps have been updated to include the correct permit boundary.

Comment BJ 63 – Round 2

No comment received.

Response BJ 63 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 5 – Round 1

Appendix D10-Wetlands, D10-1.4 – Please include a copy of the letter requesting concurrence and jurisdictional determination sent to the ACOE At the end of the text, and reference the letter in the text.

Response DM 5 – Round 1

BKS Environmental Associates, Inc., on behalf of RAMACO, requested concurrence and jurisdictional determination from the USACE on May 29, 2015. A copy of the letter sent to the USACE has been included as Attachment D10-F. Section D10-4, page D10-10 text has been updated to reflect submittal of USACE request.

Comment DM 5 – Round 2

No comment received.

Response DM 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 45 – Round 1

Appendix D10-Wetlands, Section D10.2 Results, 19. The text may want to state when (what date) RAMACO requested the jurisdictional determination from the USACE, and include this request letter as an Addendum to Appendix D10. This would provide documentation that the request was submitted, as receipt of the USACE determination may lag behind the LQD permitting process. (MDK)

Response MK 45 – Round 1

See response to DM5.

Comment MK 45 – Round 2

No comment received.

Response MK 45 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Appendix D11

Comment BJ 26 – Round 1

Appendix D11, Alluvial Valley Floor, Section D11.1, RAMACO has requested LQD to make a determination on the nature of the drainages as potential AVF within the permit boundary as well as within ½ mile of the permit boundary. This would then entail analysis of the following drainages (distances are approximations): • Hidden water Creek – all (4 mi.)

• East Fork Earley Creek – lower 1 mile

• Slater Creek – lower 3 miles

• Tongue River – ½ mi. east of Interstate 90 and 4 mi. west of Interstate 90 at the Acme exit.

Prior to such a declaration, LQD staff will have to perform a variety of assessments designed to assist us in making a declarative statement about AVF classification. An AVF declaration will be made after in-depth study of the drainages. Such investigation will consist of, but not be limited to:

1. Field evaluation of the geomorphic and lithologic character of the drainages in question;

2. Determination of the agricultural characteristics of the stream course;

3. Examination of available bore hole logs that can be used to characterize the subsurface materials beneath the valley floor;

4. Determination of groundwater and surface water characteristics, both quantitative and qualitative, within the drainages in question;

5. Other evaluation processes that may be deemed necessary should initial findings warrant further, in-depth analyses.

Response BJ 26 – Round 1

Revised D11 text throughout to expand discussion on the drainages mentioned above. Incorporated previous AVF studies into Appendix D11. Information satisfying each statement can be found in the following locations as well as many other locations throughout the document:

1. Borehole logs provided in Addendum D11-3. Hidden Water Creek test pits dug by Big Horn Mine and discussed in Section D11.3 “Stream Laid Deposits.”

2. Agricultural characteristics of the stream courses are discussed in Sections D11.4.2, D11.4.3, and D11.5, in particular.
3. Bore hole logs are provided in Addendum D11-3. Additional test pit and borehole information was analyzed from the Big Horn Mine Permit No. 213.
4. Groundwater and surface water characteristics are discussed extensively in Appendix D6. Potential impacts to surface water and groundwater are discussed in the Mine Plan. The water resources are generally discussed in Section D11.4.
5. Additional research has been incorporated from the Big Horn Mine Permit No. 213. Corrections and reevaluations of the AVF study have been made throughout Appendix D11.

Comment BJ 26 – Round 2

The response to the Round 1 comment is adequate. The original comment from round 1 was intended to create dialogue between Brook Mine Brook Mine and LQD:

> a) The first goal was to engender further discussion in the permit document covering baseline information regarding the nature of all potential AVFs within the permit boundary. The Round 1 Response effectively established a starting point for both LQD and Brook Mine.
>
> b) Now that there is a common foundation for all parties, field analysis and data studies can be initiated. This work needs to be scheduled.
>
> c) Brook Mine must provide written surface owner consent enabling LQD staff access to all acreages covered in the AVF determination analysis. This includes lands defined in Round 1, BJ comment 26, itemized stream lengths by stream name and distance.

Response BJ 26 – Round 2

A field analysis and data study of the potential AVFs within the permit boundary and adjacent areas was scheduled for September 24, 2015. RAMACO has provided LQD personnel with written surface owner consent enabling LQD staff to access acreages covered in the AVF determination analysis. No edits to the text were made in response to this comment.

Comment BJ 26 – Round 3

No comment received.

Response BJ 26 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment BJ 70 – Round 3

An AVF determination for Slater Creek has yet to be finalized. The site was visited by LQD staff on September 24, 2015 for the purpose of gathering field data for the future AVF determination. This determination is in the process of analysis of data and a decision will be issued by the beginning of 2016.

Response BJ 70 – Round 3

No response required. No changes were made in response to this comment.

Comment BJ 27 – Round 1

Appendix D11, Alluvial Valley Floor, Addendum D11-3, Some of the borehole and well logs indicate a damp or wet interval encountered during drilling. Was an attempt made to allow wet materials to produce water prior to continuation of the hole or was water noted after adding another drill steel and lowering the kelly to begin the next 20 feet of hole? Typically, after the steel has been added and the compressor is engaged, a small amount of water can be air-lifted before the rotary table begins to turn. If so, are there field notes indicating water was observed during the connection?

Response BJ 27 – Round 1

It is standard procedure during drilling operations to provide wet or damp intervals an opportunity to produce water. If the intervals had produced water, this would have been noted in the drilling logs provided in Addendum D11-3. There are no other separate field notes that would provide additional information. No changes to the text were made.

Comment BJ 27 – Round 2

No comment received.

Response BJ 27 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 1 – Round 1

Appendix D11-AVF, Section D11.1 Introduction, 1. In the second paragraph on Page D11-1, the possible impacts of the proposed mining operation on the Tongue River AVF are dismissed because the area is planned for facilities level disturbance only. However, the groundwater model (Mine Plan Addendum MP-3) predicts drawdown in the Tongue River alluvium, thereby possibly affecting the AVF. As discussed in subsequent comments, additional analysis and monitoring is needed to comply with LQD Coal Rules and Regulations regarding AVFs. (MDK)

Response MK 1 – Round 1

Revised text to reference Mine Plan Section MP.6 concerning the Brook Mine's effect on the Tongue River AVF.

Comment MK 1 – Round 2

Response not accepted. Mine Plan Section MP.6 does not explicitly mention or discuss the Tongue River AVF, or AVFs in general. Please provide a more thorough discussion in MP.6 on the possible effects of mining on the AVFs, particularly the Tongue River AVF with respect to drawdown in the Tongue River alluvium. Please also see the review of the response to Comment MK 21 below. (MDK)

Response MK 1 – Round 2

Discussion of the Tongue River and Goose Creek AVFs and their associated impacts has been added to the Mine Plan in Section MP.25. In addition, a reference to this section was added to Section D11.7 in Appendix D11 and Section MP.6 in the Mine Plan. As discussed in the text, no significant impacts to the alluvial valley floors within and adjacent to the permit area are expected as no mining is planned within these areas. Potential minor impacts that could occur is the insignificant loss of water due to temporary loss of flow from ephemeral tributaries contributing to the Tongue River and Slater Creek.

Comment MK 1 – Round 3

Response accepted.

Comment MK 2 – Round 1

Appendix D11-AVF, Section D11.2 Purpose and Scope, 2. On Page D11-2, please change "Wyoming Reclamation Act" to "Wyoming Environmental Quality Act". (MDK)

Response MK 2 – Round 1

Revised text to state "Wyoming Environmental Quality Act."

Comment MK 2 – Round 2

No comment received.

Response MK 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 3 – Round 1

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 3. For identification of unconsolidated stream laid deposits, LQD Guideline No. 9 (AVF) lists two items that may be used to positively identify unconsolidated streamlaid deposits: (1) channel

bars, splays, abandoned meanders, modern flood plains, or terraces, and (2) bedload or washload sediment deposited or transported in a nonbedrock channel bottom. Presumably, item (2) would be met at the streams identified within the AVF study area. However, the permit application does not address whether the channels contain geomorphic features from item (1). Please address in the text whether channel bars, splays, abandoned meanders, modern flood plains, or terraces are observed within the streams within the AVF study area. (MDK)

Response MK 3 – Round 1

Revised text to discuss the lack of channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs in the Hidden Water Creek, Slater Creek, East Fork Earley Creek, and Earley Creek valleys.

Comment MK 3 – Round 2

No comment received.

Response MK 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 4 – Round 1

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 4. On Page D11-5, the conclusion that the materials in Hidden Water Creek valley do not meet the definition of unconsolidated streamlaid deposits, is in conflict with the conclusion from the Big Horn Mine Permit. The Big Horn Mine Permit (Appendix D6, Pages D6-151 to D6-158) describes the evaluation of unconsolidated streamlaid deposits on lower Hidden Water Creek. The permit states: "The conclusion verified from the pit observations is that these deposits are unconsolidated and stream laid. Small isolated patches of colluvium or bedrock can be found throughout the alluvial deposits, but these characteristics do not exclude the deposit from being stream laid." Please evaluate the data and findings from the Big Horn Mine Permit before a conclusion is drawn about the absence of unconsolidated streamlaid deposits on Hidden Water Creek. (MDK)

Response MK 4 – Round 1

Revised text to discuss the findings of the Big Horn Mine from test pits in the Hidden Water Creek valley. Additionally, Exhibit D11.3-1 was revised to show the locations of the Big Horn Mine test pits in Hidden Water Creek in relation to both the Brook Mine permit area and the Big Horn Mine permit area. Added the Big Horn Mine Permit State Decision Document (SDD) 213-T2 to Addendum D11-2.

Comment MK 4 – Round 2

No comment received.

Response MK 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 5 – Round 1

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 5. The Big Horn Mine Permit also describes subirrigation and flood irrigation studies on lower Hidden Water Creek and concludes: "Due to the lack of subirrigation and extremely low potential for flood irrigation, Hidden Water Creek is not an alluvial valley floor." Although this is in the approved mine permit, it does not appear that an explicit AVF determination for Hidden Water Creek was ever issued by the LQD, and the AVF findings in the SDDs for the Big Horn Mine Permit do not mention Hidden Water Creek. The Brook Mine Permit application should incorporate these previous AVF studies on Hidden Water Creek into Appendix D11. (MDK)

Response MK 5 – Round 1

See response to comment MK 4. Additionally, while the Big Horn Mine State Decision Documents do not mention Hidden Water Creek, the SDD 213-T2 states that "No other drainages are of significant size or lack the stream laid deposits necessary to be an Alluvial Valley floor within the renewal and/or amendment areas." Hidden Water Creek is located within the renewal area and was not included within the originally declared AVF area. Although it was not mentioned by name, it has been declared not to be an AVF within the Big Horn Permit Area. This SDD has been added to Addendum D11-2 and discussion added to the text in Section D11.3.

Comment MK 5 – Round 2

No comment received.

Response MK 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 6 – Round 1

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 6. On Page D11-6 it is stated the three monitor wells were installed along the thalweg of Slater Creek. The transects in Exhibit D11.3-2 show that two of the wells (578513-AL and 578418-AL) are not along the thalweg but are rather upgradient of the channel. Please revise this description in the text. (MDK)

Response MK 6 – Round 1

Revised text to more accurately state that the monitor wells are along or near the thalweg.

Comment MK 6 – Round 2

No comment received.

Response MK 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 7 – Round 1

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 7. It appears that from Exhibit D11.1-1 that subirrigation is occurring on Earley Creek within the AVF study area. Please explain why subirrigation was not mapped on Earley Creek. (MDK)

Response MK 7 – Round 1

Revised Exhibit D11.1-1 to show potentially subirrigated lands on Earley Creek. The text was revised in Section D11.4.2 to reflect that subirrigation potentially occurs along Earley Creek.

Comment MK 7 – Round 2

No comment received.

Response MK 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 8 – Round 1

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 8. On Page D11-6, second paragraph, the alluvial/colluvial potentiometric surface is dismissed as a source of subirrigation along Slater Creek. However, the other hydrologic processes responsible for the subirrigation are not identified. Please discuss in the text why subirrigation is occurring along Slater Creek. (MDK)

Response MK 8 – Round 1

Revised text to discuss the presence of burn areas overlying residual coal ash bands that serve as aquacludes which prevent water from entering or escaping the coal below.

Comment MK 8 – Round 2

No comment received.

Response MK 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 9 – Round 1

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 9. The cross-sections in Exhibit D11-3-2 would be improved if the active channel and any floodplains or terraces were shown. A description of the materials in the active channel bottom would also help identify unconsolidated streamlaid deposits. (MDK)

Response MK 9 – Round 1

Revised Exhibit D11.3-2 to show the 2-year, 24-hour flood inundation area and the location of the active channel. Data regarding the materials in the active channel bottom are presented in the borehole logs in Addendum D11-3.

Comment MK 9 – Round 2

Response not accepted. The cross-sections were updated as requested but it is not clear if the materials from the borehole logs truly represent the active stream channel, as many of the borehole logs are shown to be tens to hundreds of feet away from the active channel. Please provide a description of the materials in the active channel bottom of both Hidden Water Creek and Slater Creek. (MDK)

Response MK 9 – Round 2

Borehole locations were chosen in areas that would represent the natural extent of the alluvium in the channel and those that could be accessed in order to obtain these boreholes. So while boreholes are located ten to a hundred feet off the natural channel in actuality, these areas are the closest location that could be physically accessed to obtain the boreholes due to the limitations of the drilling equipment. In addition, to ensure the boreholes were drilled in a location that was properly depicting the potential alluvial/colluvial material of the channel, the presence of scoria alluvial/colluvial material was used as an identifier. As exhibited in Addendum D11-3, scoria material was recorded in the majority of borehole logs. Text has been added to Section D11.3 regarding the selection of borehole locations.

Comment MK 9 – Round 3

Response accepted.

Comment MK 10 – Round 1

Exhibit D11.4-1, the extent of irrigated lands shown in Sections 2 and 11 along Slater Creek may not be correct. According to the summary for the Hart Brothers Ditches water right (permit 1317) in the SEO database, the land being irrigated under the water right has decreased to 23 acres:

> THIS FACILITY IS MADE UP OF TWO DITCHES. THE WEST DITCH HAVING A POINT OF DIVERSION IN LOT 2 AND THE EAST DITCH HAVING A POINT OF DIVERSION IN THE SENE OF SECTION 3, T57N, R85W. T57N, AND 58N, R85W

HAS BEEN DEPENDENTLY RESURVEYED. REQUEST FROM PADLOCK RANCH TO ELIMINATE 67 ACRES AS FOLLOWS: 32 ACRES IN THE SWSW OF SECTION 2 - 30 ACRES IN THE NENW AND 5 ACRES IN THE NWNW OF SECTION 11 ALL IN T57N, R85W, RECEIVED AND GRANTED. REQUEST OF ELIMINATION AND PROOF OF OWNERSHIP FILED IN MISCELLANEOUS NOTICES. ADJUDICATED WITH H.H. WILLIAMS AS APPROPRIATOR. PERMIT RECORD REFLECTS SOURCE AS SLATER CREEK AND WATER STORED IN THE HART BROTHERS RESERVOIR, P60R, XR7825A, HOWEVER CERTIFICATE RECORD REFLECTS .91 CFS FOR THE IRRIGATION OF 64 ACRES. BOC PETITION II 89-4-2 BY PADLOCK RANCH WAS GRANTED TO ISSUE AMENDED CERTIFICATE C77/290A TO REDESCRIBE LANDS WITHOUT CHANGING LAND TOTALS AND TO CHANGE POINT OF DIVERSION FROM THE RECORD POINT IN THE NWNE AND SENE OF SECTION 3, 57N, R85W AND PARTIAL MEANS OF CONVEYANCE FOR 41 ACRES (.59 CFS) TO THE WILLIAMS DITCH, P8710D, C77/289A DIVERTING WATER FROM SLATER CREEK IN THE SESW OF SECTION 34, T58N, R85W AS RECORDED IN ORDER RECORD BOOK 36, PAGES 385-390 AND RECEIVED ON CD3/578A. THIS LEAVES 23 ACRES STILL IRRIGATED UNDER THIS PERMIT. LANDS SHOWN BELOW AS "AME" AND "ELI" ARE THOSE ORIGINALLY DESCRIBED UNDER THIS DITCH.

Please clarify the irrigated acreage status for the Hart Brothers Ditches water right with the SEO and revise Exhibit D11.4-1 accordingly. (MDK)

Response MK 10 – Round 1

Exhibit D11.4-1 was revised to more accurately capture irrigated lands on Slater Creek in Sections 2 and 11 of Township 57 North, Range 85 West.

Comment MK 10 – Round 2

No comment received.

Response MK 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 11 – Round 1

Appendix D11-AVF, Section D11.4.4 Water Quality, 11. On Page D11-7, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

Response MK 11 – Round 1

Removed text referencing State of Montana water quality standards.

Comment MK 11 – Round 2

No comment received.

Response MK 11 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 12 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 12. On Page D11-8, second paragraph, it states that Exhibit D11.1-1 shows that sufficient water supply does not exist for consistent agricultural practices in East Fork Earley Creek. However, Exhibit D11.4.1 shows a point of diversion for Earley Creek Ditch No. 1 and several areas of irrigated lands less than 40 acres in East Fork Earley Creek. As documented in Addendum D11-4, there is an adjudicated water right for irrigation in this location. So there may be sufficient water supply for consistent agricultural practices. The text needs to further expand on this discussion of East Fork Earley Creek since there is an adjudicated water right for irrigation. (MDK)

Response MK 12 – Round 1

Revised text to include the Earley Creek Ditch No. 1 water right, but explained that subirrigation must not be prevalent in East Fork Earley Creek because no culvert or other conveyance structure is present beneath I-90. If subirrigation was prevalent and without a conveyance structure beneath I-90, substantial amounts of water would back up against the interstate.

Comment MK 12 – Round 2

Response not accepted. Please also add to the text any history available on the Early Creek Ditch No. 1 water right and the irrigation associated with the water right. I looked at several years of aerial imagery and it does not appear that any areas have been irrigated under this water right in recent times. I am able to view what appears to be the headgate and two ditches. It is possible that irrigation was abandoned long ago, which would support the contention that there is not sufficient water supply for consistent agricultural practices. Nonetheless, the water right remains fully adjudicated according to the SEO water rights database, so more discussion of this area is warranted in the text. (MDK)

Response MK 12 – Round 2

Text at the end of the second paragraph of Section D11.5 was added regarding the Earley Creek Ditch No.1. As presented in the text, based on CIR, imagery of the area, vegetation studies and absence of a conveyance structure under Interstate 90, the Earley Creek Ditch No.1 doesn't appear to have been used for irrigation purposes for some time.

Comment MK 12 – Round 3

Response accepted.

Comment MK 13 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 13. On Page D11-8, last paragraph, it states that the hay meadows along Slater Creek in Sections 2 and 11 are not within the boundaries of subirrigation or natural flood irrigation.

> (a) The areas symbolized as irrigated lands in Exhibit D11.4-1 do not necessarily correspond to hay meadows, as the imagery shows hay meadows in the SWNE, SENE, and NESE of Section 11, and the NWSW of Section 12. The hay meadows appear to correspond with the area mapped as "AG" in the Vegetation Map (Exhibit D8.2-1) in Addendum D8.
>
> (b) The irrigated area shown in Exhibit D11.4-1 near the Landen Ditch does overlap with subirrigation mapped in Exhibit D11.1-1.

Please re-evaluate the area of hay meadows along Slater Creek and revise the text accordingly. Comments No. 15 and 16 below also relate to this issue. (MDK)

Response MK 13 – Round 1

The text was revised in Section D11.5 to reflect the presence of limited hay meadows and overlapping of irrigation with subirrigation on the upper reaches of Slater Creek in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West. Exhibit D11.4-1 was revised to show irrigation in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West.

Comment MK 13 – Round 2

No comment received.

Response MK 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 14 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, On Page D11-8, last paragraph, it states that, besides Hart Bros Ditches, the remaining portion of the Slater Creek valley does not contain SEO water rights. This is not the case as Exhibit D11.4-1 shows Landen Ditch in the NENW of Section 11. This water right (P11695) does not appear in Addendum D11-4. Please revise the text and add this water right to Addendum D11-4. (MDK)

Response MK 14 – Round 1

The text was revised in Section D11.5 to discuss the Landen Ditch water right (P11695). A copy of the Landen Ditch water right was added to Addendum D11-4.

Comment MK 14 – Round 2

No comment received.

Response MK 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 15 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 15. The irrigated acreage for the Landen Ditch water right appears to be 18 acres for one point of use and 22 acres for a second point of use. Please add these areas to Exhibit D11.4-1. (MDK)

Response MK 15 – Round 1

Exhibit D11.4-1 was revised to more accurately reflect irrigated lands in the vicinity of the Landen Ditch.

Comment MK 15 – Round 2

No comment received.

Response MK 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 16 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 16. The Hall Ditch (SEO Permit 5195), mapped in Section 11 of Exhibit D11.4.1, apparently provides irrigation water for hayfields in the NESE of Section 11 (30 acres) and the NWSW of Section 12 (22 acres). This water right does not appear in Addendum D11-4. Please add this water right to the Addendum and add the irrigated acreages to Exhibit D11.4-1. (MDK)

Response MK 16 – Round 1

A copy of the Hall Ditch water right (SEO Permit 5195) was added to Addendum D11-4. Exhibit D11.4-1 was revised to depict irrigated lands in Section 12, Township 57 North, Range 85 West. The text in Section D11.5 was revised to discuss the Hall Ditch water right.

Comment MK 16 – Round 2

No comment received.

Response MK 16 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 17 – Round 1

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 17. Portions of Earley Creek and East Fork Earley Creek are within the AVF study area yet the permit application does not attempt to conclude if these streams contain AVFs. Presumably, the LQD will need to make an AVF finding on these streams. (MDK)

Response MK 17 – Round 1

See response to Comment BJ 26. Additional discussion has been added to aid WDEQ in the AVF findings of East Fork Earley Creek and Earley Creek. Both valleys are upstream of mining activities proposed by RAMACO such that no material damages are expected to either valley.

Comment MK 17 – Round 2

Response not accepted. Additional discussion was added for East Fork Earley Creek, but not Earley Creek. However, it is unclear from Comment BJ 26 if the LQD intends to make an AVF determination for Earley Creek. Additional response to this comment may be needed after checking with other LQD staff on whether or not a determination will be made for Earley Creek. (MDK)

Response MK 17 – Round 2

As discussed with LQD personnel, the majority of Earley Creek is outside of the permit area and ½ mile adjacent study boundary, however a small portion of the creek intersects the ½ mile study boundary in T.57N., R.84W. in the northwest quarter of Section 16 and southwest quarter of Section 9. These portions of land are outside of any planned surface disturbance and groundwater impacts to the area are not expected; therefore, a study of these lands was not included in Appendix D11. Discussion of Earley Creek will remain in Appendix D6. No changes to the D11 text were made in response to this comment.

Comment MK 17 – Round 3

Response accepted.

Comment MK 18 – Round 1

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 18. The first bullet for Slater Creek on Page D11-9 dismisses the positive identification of unconsolidated

stream laid deposits because a layer of colluvial material was found over alluvial material. However, as stated in Appendix D5 on Page D5-8 and Page D5-9, sub-rounding of the clinker present in the cuttings suggests water driven deposition of limited extent. Also, as discussed in Comment No. 3, the application did not evaluate unconsolidated streamlaid deposits in a manner that is consistent with identification criteria listed in LQD Guideline No. 9. The application has not provided sufficient evidence that unconsolidated stream laid deposits are not present along Slater Creek. (MDK)

Response MK 18 – Round 1

See response to Comment MK 3. The discussion on the Slater Creek valley has been further expanded to include the absence of unconsolidated stream laid deposits such as channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs. Exhibit D11.3-1 clearly indicates the presence of undifferentiated alluvium and colluvium (Qac) in the Slater Creek valley.

Comment MK 18 – Round 2

No comment received.

Response MK 18 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 19 – Round 1

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 19. The third bullet on Page D11-9 for Slater Creek should be clarified that the width of natural flood irrigation in the valley is generally insufficient to provide for economic agricultural practices. However, economic agricultural practices clearly occur immediately upstream of the proposed mine permit boundary because of artificial flood irrigation of hayfields adjacent to the channel. These practices are documented by existing water rights that are approximately 100 years old. Please revise this discussion. (MDK)

Response MK 19 – Round 1

The text in Section D11.6 of Slater Creek's third bullet was revised to include the irrigated hayfield upstream of the permit boundary.

Comment MK 19 – Round 2

No comment received.

Response MK 19 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 20 – Round 1

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 20. The fifth bullet for Hidden Water Creek on Page D11-9 seems to dismiss the positive identification of unconsolidated stream laid deposits because of colluvial material with shallow bedrock. However, as previously noted, this conflict with information in the Big Horn Mine permit concerning unconsolidated stream laid deposits on Hidden Water Creek. (MDK)

Response MK 20 – Round 1

Refer to response of Comment MK 4. The Big Horn Mine permit boundary has been added to Exhibit D11.1-1. The text in Section D11.6 has been updated to include a summary of the discussion stating that the Big Horn Coal Permit No. 213-T2 SDD determined the limits of the AVF, and no portion of Hidden Water Creek was determined as being AVF.

Comment MK 20 – Round 2

No comment received.

Response MK 20 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 21 – Round 1

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, Although the LQD has not yet issued its formal finding, the segment of the Tongue River adjacent to the proposed permit area, which was not declared under previous LQD findings, likely contains an AVF.

> (a) If this AVF is significant to farming, the applicant must comply with LQD Coal Rules and Regulations Chapter 3, Section 2(d)(ii) and demonstrate that the proposed mining operations will not materially damage the quantity and quality of water that supplies the Tongue River AVF. The absence of direct mining on the Tongue River AVF does not relieve the requirement of assessing the probable hydrologic impacts of the proposed operation to the AVF, particularly since the groundwater model in Mine Plan Addendum MP-3 predicts drawdown in the Tongue River alluvium. (MDK)
>
> (b) Regardless of the significance to farming, the applicant must also maintain and/or restore the essential hydrologic functions of the Tongue River AVF. The applicant must therefore identify the essential hydrologic functions of the Tongue River AVF and either (1) provide an analysis that the proposed operation will not hamper the essential hydrologic functions, or (2) demonstrate that the essential hydrologic functions will be restored. The essential

hydrologic functions for another part of the Tongue River AVF are described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27), so this may be a good starting point to consider. (MDK)

(c) A monitoring system is also required to demonstrate the essential hydrologic functions are maintained, as per LQD Coal Rules and Regulations, Chapter 5, Section 3(b)(ii). Since the groundwater model (Mine Plan Addendum MP-3) predicts 2.5 feet of drawdown in the Tongue River alluvium, the monitoring system may likely contain alluvial monitoring wells and periodic evaluation of color-infrared imagery. (MDK)

Response MK 21 – Round 1

Revised text as requested. Revised text by adding information regarding the essential hydrologic functions of the declared AVFs (Tongue River and Goose Creek) from the SDD in Addendum D11-2. Also, added portion of text to describe possible monitoring system and plan for the AVFs that may be affected.

Comment MK 21 – Round 2

Response not accepted. Please see the review of the response to Comment MK 1. Please provide a more specific reference to the section of the Mine Plan (MP.6) that discusses the probable hydrologic impacts to the Tongue River and Goose Creek AVFs. Please also prove a more specific reference to the appropriate portion of the Mine Plan or Reclamation Plan that provides further details on the AVF monitoring plan. (MDK)

Response MK 21 – Round 2

See comment MK 1-Round 2 response. Discussion of the AVF monitoring plan for the Tongue River has been added to the Mine Plan in Section MP.25 as well as the Reclamation Plan in Section RP.10. In addition, monitoring locations have been updated on Table MP.7-4, Exhibit MP.7-1 and Exhibit RP.8-5.

Comment MK 21 – Round 3

Response not accepted. With respect to the three proposed alluvial monitoring wells, please state in the text in Section MP.25 that these wells will be installed prior to commencing any mining-related disturbance.

Response MK 21 – Round 3

A statement that the alluvial monitoring wells along the Tongue River will be installed prior to mining related disturbance was added to the last paragraph in Section MP.25 of the Mine Plan.

Comment MK 22 – Round 1

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, 22. The essential hydrologic functions of the adjacent Goose Creek AVF must also be maintained during the proposed mining operation. The application needs to list these functions, as described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27). A monitoring system is also required to demonstrate that the essential hydrologic functions will be maintained. (MDK).

Response MK 22 – Round 1

See response to comment MK 21.

Comment MK 22 – Round 2

Response not accepted. The essential hydrologic functions of the Goose Creek AVF are listed, but the text does not explicitly address a monitoring system for the Goose Creek AVF, only the Tongue River AVF. Please commit to a similar monitoring system for the Goose Creek AVF to demonstrate that the essential hydrologic functions will be maintained. The text should also reference the appropriate portion of the Mine Plan or Reclamation Plan that provides further details on the AVF monitoring plan. (MDK)

Response MK 22 – Round 2

See comment MK 1-Round 2 response. Discussion of the AVF monitoring plan for Goose Creek has been added to the Mine Plan in Section MP.25 as well as the Reclamation Plan in Section RP.10. In addition, monitoring locations have been updated on Table MP.7-4, Exhibit MP.7-1 and Exhibit RP.8-5.

Comment MK 22 – Round 3

Response accepted.

Comment MK 104 – Round 2 (New Comment)

The permit application suggests that the Tongue River and Goose Creek contain AVFs. Appendix D-11 must therefore also include a discussion of the importance of these AVFs to farming, as discussed in LQD Guideline No. 9 (see Part IV, Section C). (MDK)

Response MK 104 – Round 2 (New Comment)

Text in Section D11.5 has been revised to discuss the importance of AVFs to farming.

Comment MK 104 – Round 3

Response conditionally accepted. The permit application has not provided the information discussed in LQD Guideline No. 9, Part IV, Section C for determining the importance of farming to the AVFs that presumably will be declared by the LQD on the Tongue River and Goose Creek. However as per Guideline No. 9, this information is

only required for "affected AVFs". The permit application implies that the AVFs on the Tongue River and Goose Creek should not be considered "affected AVFs" since farming would not be interrupted, discontinued, or precluded, and the essential hydrological functions of the AVFs would be preserved during mining. No mining is scheduled for these areas and the disturbance that is proposed appears to be minor enough such that essential hydrologic functions would not be affected. Therefore a significance to farming determination for these AVFs does not appear to be required. This may be subject to change pending other LQD staff input when the AVF determinations are made. (MDK)

Response MK 104 – Round 3

No response is required. No changes have occurred in response to this comment.

Comment MK 105 – Round 2 (New Comment)

Appendix D-11 (or perhaps Mine Plan MP.6) should also include a discussion of whether the proposed operation would interrupt, discontinue, or preclude agriculture use of the Tongue River and Goose Creek AVFs. This discussion should evaluate if the predicted drawdown in the Tongue River alluvium (Mine Plan Addendum MP-3) would result in any loss of agricultural use of the AVF. (MDK)

Response MK 105 – Round 2 (New Comment)

Text has been added to Mine Plan Section MP.25 to describe how agricultural use of the Tongue River and Goose Creek AVFs will not be precluded.

Comment MK 105 – Round 3

Response accepted.

Comment MK 121 – Round 3 (New Comment)

D11.5 Agricultural Practices. The CHIA site inspection report (Dated October 21, 2015 and mailed to Randall Atkins c/o WWC Engineering) discussed the abandoned Conable Reservoir and Ditch and Lateral system in Sections 12 and 13 within the proposed Brook Mine permit area. According to the SEO water rights database, a water right for Conable Reservoir was granted in 1901 (P223.0R). The purpose of the reservoir was to store water for irrigation of lands under the Conable Ditch and Lateral, which also held a water right to divert 1.46 cfs (P3088.0D). The water right allowed for using the water for irrigation of 100 acres of land adjacent to Slater Creek in T57N, R85W, Section 13. Both water rights were cancelled in 1906, and it is unknown the extent that the irrigation was ever developed. The dam for the reservoir has long since failed, allowing Slater Creek to flow freely through. In Section D11.5, please incorporate the history of the Conable Reservoir and Ditch and Lateral System, as this demonstrates there was a historical attempt to irrigate lands in the Slater

Creek valley within Section 13 of the proposed permit boundary. The attempt apparently failed and was abandoned and the water rights were cancelled. (MDK)

Response MK 121 – Round 3 (New Comment)

Discussion of the Conable Reservoir and Conable Ditch and Lateral were added as the fourth paragraph in Section D11.5.

Comment MK 122 – Round 3 (New Comment)

D11.7 Mining of the Alluvial Valley Floor. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D 11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP .5-l, which was updated for this round. Please include a statement in the text of Section D11.7 that there is some minor disturbance proposed within the AVF extent. Please also see Comments 7 (MK 126) and 8 (MK 127) below that request this be addressed in the relevant sections of the Mine Plan and Reclamation Plan. (MDK)

Response MK 122 – Round 3 (New Comment)

Minor disturbance is planned within the declared Big Horn Mine AVF extent in Section 21of Township 57 North, Range 84 West. Text discussing the minor disturbance has been added to the first paragraph of Section D11.7, as well as a reference to the applicable sections of the Mine Plan and Reclamation Plan for further discussion of the disturbed AVF.

Mine Plan

Comment BJ 28 – Round 1

Volume 11, Mine Plan, Section MP.1.2.1, pg. MP-4, Tunnel and pillar widths are discussed in general terms. Please approximate a range for the widths, in feet, in the narrative to give context to the discussion.

Response BJ 28 – Round 1

Added text as suggested.

Comment BJ 28 – Round 2

No comment received.

Response BJ 28 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 29 – Round 1

Volume 11, Mine Plan, The fifth sentence, beginning with "To minimize the amount of exposure..." does not make sense. Please rewrite the sentence for clarity.

Response BJ 29 – Round 1

Added text as suggested.

Comment BJ 29 – Round 2

No comment received.

Response BJ 29 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 30 – Round 1

Volume 11, Mine Plan, The narrative also references figure MP.1-3 as a general schematic of the highwall mining operation. The figure depicts significant vertical highwalls above the mining operation. The text mentions that the highwalls will be vertical where the Masters and Carney converge but the illustration depicts conditions where the coal seams appear to be separated by a considerable thickness of parting. It is our experience that vertical highwalls in the Powder River Basin are unstable and should be discourage wherever possible. What would the maximum thickness of burden approximate where the vertical highwalls will exist? Please include an average on the schematic as has been done for pit width and bench width.

Response BJ 30 – Round 1

The figure has been updated to include the average depths.

Comment BJ 30 – Round 2

No comment received.

Response BJ 30 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 31 – Round 1

Volume 11, Mine Plan, Pages MP-3 and MP-4, These pages describe the highwall mining operation in vague generalities. The narrative states that the continuous miner will advance into the working face to a depth of 2,000 feet. The manufacturer's specifications for the ADDCAR system state that the depth of a cut is 1,600 feet. Is this a discrepancy of 400 feet or is there a difference in mining tools and the ADDCAR system comes with multiple depth capacities. Please clarify.

Response BJ 31 – Round 1

Conversations with ADDCAR representatives indicates that they will be able to extend the range of the highwall mining system so cuts up to 2,000 feet can be achieved.

Comment BJ 31 – Round 2

No comment received.

Response BJ 31 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 32 – Round 1

Volume 11, Mine Plan, A general word of guidance – Ramps are mentioned in the narrative as designed to an 8% grade. The Cat 777 can generally handle this grade fairly well under most conditions. The Mack Titan trucks, however, may be problematic under certain conditions. Entering the pit on the ramp could be difficult for the Mack trucks with pups if the ramp has been watered to control dust. The overburden materials used for ramp systems are generally silty with a clay matrix and overwatering can create slipping hazards for vehicles. A truck with multiple trailers will have difficulty navigating these conditions. A 6% ramp under these situations is strongly advised.

Response BJ 32 – Round 1

Revised text as suggested.

Comment BJ 32 – Round 2

No comment received.

Response BJ 32 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 33 – Round 1

Volume 11, Mine Plan, The narrative describes the tunnel width as variable, depending on the cutting head chosen. Please indicate approximate footages of the tunnel widths. For example, Bucyrus and Joy manufacture continuous miners that have heads ranging from 11 to 12 feet in width. A mention of those widths would clarify the narrative. Also the protective coal pillars are described but have no dimensions indicated. The pillar width to tunnel width is crucial so an approximation of the remnant pillars width in feet is required. Please include approximate widths for tunnel and pillar widths.

Response BJ 33 – Round 1

See response to Comment BJ 28. The text has been updated as requested.

Comment BJ 33 – Round 2

No comment received.

Response BJ 33 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 34 – Round 1

Volume 11, Mine Plan, Section MP.1.2.2, The dozer push method of overburden removal is not adequately described. Though Figure MP.1-4 does depict the dozer push materials to some extent, the overlapping nature of the multiple lift system can be confusing to some. The narrative on page MP-4 is too brief. Please elaborate further on the dozer push staging and overburden removal. Perhaps an illustration that depicts the dozer removal in stages would be more appropriate. This can be accomplished by creating a series of illustrations rather than only one. Please clarify the methodology.

Response BJ 34 – Round 1

Revised text as requested. Created Figure MP.1-5.

Comment BJ 34 – Round 2

No comment received.

Response BJ 34 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 35 – Round 1

Volume 11, Mine Plan, Section MP.1.4, Pg. MP-5, The last sentence does not make sense. Please rewrite the sentence.

Response BJ 35 – Round 1

Removed last sentence for clarity.

Comment BJ 35 – Round 2

No comment received.

Response BJ 35 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 36 – Round 1

Volume 11, Mine Plan, Section MP.4.2.3, Pg. MP-15, The discussion of temporary topsoil stockpiles describes creating a ring ditch around the topsoil pile if there is a potential for water erosion during the 2 week to 6 month life of the pile. Since the climate is unpredictable and subject to rapid changes, temporary topsoil stockpiles (2 weeks to 6 months) will be required to have ring ditches in all cases with no qualifiers. LQD writes more violations concerning inadequate topsoil practices than any other issue. Rewrite the narrative to indicate that all temporary topsoil stockpiles will have a ring-ditch and berm created for piles having a life of 2 weeks or more. Keep in mind that even a short-lived topsoil stockpile could generate a violation if a sudden rainstorm were to erode the soil and waste it on the surrounding terrain. RAMACO may want to allow for this as well

Response BJ 36 – Round 1

Updated text as requested.

Comment BJ 36 – Round 2

No comment received.

Response BJ 36 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 37 – Round 1

Volume 11, Mine Plan, Section MP.4.3.4, Pg. Mp-17, A swell factor of 16% is being used to convert bank cubic yards to loose cubic yards. The number was generated from information attained from Big Horn Coal (PT213). Where was this information located? Many of the coal mines in the northwestern corner of the Powder River Basin use a swell factor of 13% - 14% since the overburden material is finer grained, with a higher clay content than mines on the eastern margin of the basin. Please cite the use of a 16% swell factor.

Response BJ 37 – Round 1

Revised text as requested. Table MP.4-9 provides typical swell and load factors of materials.

Comment BJ 37 – Round 2

No comment received.

Response BJ 37 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 38 – Round 1

Volume 11, Mine Plan, Section MP.6.1, Pg. MP-39, The second paragraph discusses surface runoff attenuation during mine years 4 and 5. The peak flow rates for precipitation events will be attenuated by the mining trenches that lie perpendicular to the flow in the local drainages. What flow events are expected to be attenuated by the trenches? Will the 2 year, 10 year, or 100 year events be considered as an average event? Please modify the narrative, in general terms, to define which precipitation event will be used when designing the pit drainage plans.

Response BJ 38 – Round 1

Updated text as requested.

Comment BJ 38 – Round 2

No comment received.

Response BJ 38 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 39 – Round 1

Volume 11, Mine Plan, Section MP.8, Pg. MP-47, The narrative mentions that potable water will be hauled to the mine an placed in a cistern. Why is a cistern system being considered for potable water instead of a reverse osmosis unit? The local residents use such systems as do the mines. How large of a cistern will be used for water storage? Please modify the narrative to expand on the rational behind using a cistern.

Response BJ 39 – Round 1

The text has been revised. The final potable water system has not been determined.

Comment BJ 39 – Round 2

No comment received.

Response BJ 39 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 40 – Round 1

Volume 11, Mine Plan, Section MP.9.9, Pg. MP-52, When pre-dug mud pits are to be used for exploration drilling, the topsoil must be protected from contamination by removal and stockpiling. The pit location must be stripped to the base of the soil with an areal extent that allows the pit materials to be stacked as spoil without encroaching on native surface. Reclamation shall occur in a manner that will best restore the surface to its pre-disturbance condition. These contingencies need to be

better described in the narrative. Please modify the text to reflect the aforementioned conditions.

Response BJ 40 – Round 1

Revised text as suggested.

Comment BJ 40 – Round 2

No comment received.

Response BJ 40 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 41 – Round 1

Volume 11, Mine Plan, Section MP.18, Pg. MP-68, The second paragraph discusses the speed limits that will be set on haulroads to protect wildlife. Approximately what speed limits will be used?

Response BJ 41 – Round 1

Updated text with a 45 MPH Speed Limit.

Comment BJ 41 – Round 2

No comment received.

Response BJ 41 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 42 – Round 1

Volume 11, Mine Plan, Section MP.20, Pg. MP-69, The brief description of underground mining should state that no "conventional" underground mining will occur. Highwall coal recovery is an underground mining technique, but no personnel work underground. Thus the mining is modified underground mining.

Response BJ 42 – Round 1

Revised text as requested.

Comment BJ 42 – Round 2

No comment received.

Response BJ 42 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 43 – Round 1

Volume 11, Mine Plan, Section MP.24, Pg. MP-70, The word "Operation" is misspelled in the title (OPERTATION).

Response BJ 43 – Round 1

Revised text as requested.

Comment BJ 43 – Round 2

No comment received.

Response BJ 43 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 44 – Round 1

Volume 11, Mine Plan, Section MP.25, Pg. MP-71, The second paragraph, third sentence, discusses requiring additional permitting. The word "additional" is misspelled (addidtional).

Response BJ 44 – Round 1

Revised text as requested.

Comment BJ 44 – Round 2

No comment received.

Response BJ 44 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 45 – Round 1

Volume 11, Mine Plan, TABLE MP.1-1, The total disturbance should read 895 acres, not 775. Please correct the table.

Response BJ 45 – Round 1

Revised text as requested.

Comment BJ 45 – Round 2

No comment received.

Response BJ 45 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 46 – Round 1

Volume 11, Mine Plan, FIGURE MP.1-3, The average width of the pit floor and safety bench have average widths indicated on the drawing. Please insert the average heights of the vertical highwalls in these situations.

Response BJ 46 – Round 1

Revised Figure MP.1-3 requested.

Comment BJ 46 – Round 2

No comment received.

Response BJ 46 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 47 – Round 1

Volume 11, Mine Plan, FIGURE MP.1-4, The cross section, as drawn, is confusing. It would appear that dozer pushed, loose material significantly exceeds the bank material available in the highwall. The figure is not drawn to scale but a more accurate attempt to represent dirt volumes would be appreciated. Also, the cross section itself does not make sense in the way that operational steps are illustrated. A series of cross sections over time would be much more beneficial to define the appearance of the dozer push. Please modify the figure accordingly. A sample of an idealized schematic is attached. It is volumetrically accurate.

Response BJ 47 – Round 1

Figure MP.1-4 has been updated to add clarity.

Comment BJ 47 – Round 2

No comment received.

Response BJ 47 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 48 – Round 1

Volume 11, Mine Plan, FIGURE MP.4-3, Pg. MP-F7, What is the narrow, vertical rectangle located in the center of the coal stockpile coming from the stacker?

Response BJ 48 – Round 1

The figure MP.4-3 has been updated to remove the rectangle.

Comment BJ 48 – Round 2

No comment received.

Response BJ 48 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 49 – Round 1

Volume 11, Mine Plan, Addendum MP-3, Pg. MP-3-2, The introductory paragraph states that the Brook Mine is approximately 6 miles northwest of Sheridan, Wyoming. However, in earlier narrative, the mine is said to be 6 miles south of the Montana border and 8 miles northwest of Sheridan. This passage is found in the Land Use Appendix D1-1. The distances should be uniform in all instances throughout the narrative.

Response BJ 49 – Round 1

Revised text as requested.

Comment BJ 49 – Round 2

No comment received.

Response BJ 49 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 50 – Round 1

Volume 11, Mine Plan, Addendum MP-3, Section 2.3, Figures 2.3-1 and 2.3-2 show the potentiometric surfaces for the Carney and Masters coal beds. The contours daylight and appear to be in mid-air over the Slater Creek drainage. Please adjust the contours so they terminate at the outcrop.

Response BJ 50 – Round 1

Revised Figures 2.3-1 and 2.3-2 in Addendum MP-3-17 as requested.

Comment BJ 50 – Round 2

No comment received.

Response BJ 50 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 51 – Round 1

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-3, The second to last paragraph indicates that the depth of the penetration by the continuous miner will be 2,000 feet. Is this an approximation since the listed depth for the ADDCAR device is 1,600 feet. Please clarify the discrepancy.

Response BJ 51 – Round 1

Based on communication with ADDCAR's representative 2,000 ft penetration is achievable. Generally, users of the ADDCAR system encounter increasing depth of cover with greater penetrations requiring wider web pillar between holes. The loss in recovery due to the wider pillars potentially negates any production gain from increased penetration.

Comment BJ 51 – Round 2

No comment received.

Response BJ 51 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 52 – Round 1

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-4, The discussion in this sections centers around the necessity of maintaining a straight, even cutting depth to prevent pillars from being cut too narrow to hold up the roof material and allow subsidence. The 1:1 ratio suggested by NIOSH is acceptable as long as roof strength tests bear up (no pun intended) the use of the general guidelines. A small sample of tests have been run on roof and coal rock intervals and those tests have been reported. LQD requests a narrative placed either in this location of the text or other location of RAMACO's choosing that discusses the strength tests results as it pertains to roof stability. Also, a commitment must be made in the document to sample roof material for strength testing for at least one location in every panel that will mined by the continuous miner prior to mining. Our concern rests with the competence of the overlying lithologies and their possibility for subsidence. This has been a problem in this area for decades and care must applied to characterize roof materials accurately.

A sampling plan to test compressive strength above each coal panel must be submitted prior to permit approval.

Response BJ 52 – Round 1

RAMACO must submit and have an approved MSHA Ground Control Plan that contains the strength test and commitments requested. RAMACO will provide this information when it is received and include it in the Subsidence Control Plan.

Comment BJ 52 – Round 2

No comment received.

Response BJ 52 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 53 – Round 1

Volume 11, Mine Plan, Addendum MP-6, Please provide the data used as input for the ARMPS-HWM program.

Response BJ 53 – Round 1

The following input values were used in the ARMPS-HWM program: compressive strength of coal - 660 psi, rock density - 162 lbs/ft3, abutment angle of 21°

Comment BJ 53 – Round 2

No comment received.

Response BJ 53 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 54 – Round 1

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-2, The scale of the photograph is too large to adequately depict the zones of surface subsidence from the old underground mines. Please blowup the scale to allow for clear visibility of the subsidence.

Response BJ 54 – Round 1

Cardno selected the larger scale to show that subsidence was limited to a small portion of the deep mine and not visible over other areas of the deep mine due its increased depth of cover. See revised figure in revision to Cardno's Subsidence Report

Comment BJ 54 – Round 2

No comment received.

Response BJ 54 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 55 – Round 1

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-3, This figure is very effective. It clearly shows the subsidence evident on the air photo as it correlates to

the old underground map superimposed on it. One problem, though, is that the air photo base needs to be darker, with greater contrast. The photo is a bit washed out and manipulation of the brightness/contrast aspects of the photo would help its visibility greatly. Please recalibrate the photo tonality.

Response BJ 55 – Round 1

See revised figure in revision to Cardno's Subsidence Report

Comment BJ 55 – Round 2

No comment received.

Response BJ 55 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 56 – Round 1

Volume 11, Mine Plan, Addendum MP-8, Section MP-8.5.4, The last sentence in this section indicates that there is no suitable habitat available for the Northern Long-Eared Bat. Does this include the climax Cottonwood Forest along Tongue River? The well developed understory along the river is suitable for Long-eared bat habitation though none have been located in this area. Or does the negation of the existence of the bat only apply to the area in the hills above the river where the mining will occur. Please clarify the area that was considered for potential Long-Eared Bat occurrence.

Response BJ 56 – Round 1

The text was revised to clarify.

Comment BJ 56 – Round 2

No comment received.

Response BJ 56 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 64 – Round 1

EXHIBITS, Mine Plan, Exhibit MP.1-1, The patterns used to depict surface disturbance from year to year are too similar. It is difficult to differentiate between year 0 and year 2, for example. Please recreate the surface disturbance layers to be more unique. The overburden removal sequence map (Exhibit MP.4-4) is a good example.

Response BJ 64 – Round 1

Revised Exhibit MP.1-1 as requested.

Comment BJ 64 – Round 2

No comment received.

Response BJ 64 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 67 – Round 2 (New Comment)

Mine Plan, Table MP.4-5., Overburden Stockpile Design –

The Estimated Capacity volumetrics for the Overburden stockpiles appear to be low. Based on a recalculation of the volumes given the acreage and average heights, each stockpile has a higher volume of capacity than which is shown in the table. A recalculated table would look like this:

Table MP.4-5. Overburden Stockpile Design

Stockpile Designation	Estimated Capacity **E** (cy)	Approximate Basal Area **A** (ac)	Average Height **H** (ft)	Calculated Capacity **C** (cy)[1]	Difference[2]
OB-1	300,000	4.7	55	417,047	117,047
OB-2	500,000	9.4	55	834,093	334,093
OB-3	950,000	13.4	95	1,189,027	239,027
OB-4	1,000,000	21.4	85	1,898,893	898,893
OB-5	730,000	9.2	70	816,347	86,347
OB-6	400,000	8.3	55	736,487	336,487
OB-7	400,000	8.9	70	789,727	389,727
OB-8	1,100,000	14.2	75	1,260,013	160,013
OB-9	510,000	8.7	55	771,980	261,980
OB-10	260,000	5.6	45	496,907	236,907
OB-11	100,000	4.1	50	363,807	263,807
OB-12	1,200,000	14.0	95	1,242,267	42,267
OB-13	165,000	4.2	45	372,680	207,680
OB-14	122,000	5.6	55	496,907	374,907
OB-15	76,000	3.2	30	283,947	207,947
OB-16	104,000	3.6	20	319,440	215,440
	7,917,000			12,289,567	4,372,567

[1]Calculated Capacity C = ((A*43560)*H)/27
[2]Difference = C-E

Based on the Recreated Table, Volumes derived from acreage and average height formulas give values that are approximately 35% too low. Please reevaluate the table in light of the mathematical calculations. Or, if there are extenuating circumstances that help create the overburden volumes in column B, please explain the seeming inconsistency.

Response BJ 67 – Round 2 (New Comment)

The capacities of the overburden stockpiles calculated by WDEQ do not account for the sideslopes of the overburden stockpiles. The calculations are appropriate for rectangular prisms with a uniform rectangular cross section. This explains why the calculations area significantly higher. The reported volumes by RAMACO are outputs from AutoCAD which uses 3D surfaces to construct stockpiles and calculate volumes. AutoCAD also takes into account the variation in a topographical surface that the stockpiles are placed on, which can affect the extent of the basal area and the average height. The volumes of the stockpiles were also rounded up to be conservative in the reported volumes. The average height is only a rough approximation because the height will change considerably depending upon the topographic surface beneath each pile. No changes have been made to the volumes of overburden. However, Table MP.4-5 has been revised to indicate sideslope angles and that the volumes have been computed using AutoCAD.

Comment BJ 67 – Round 3

No comment received.

Response BJ 67 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment BJ 69 – Round 3 (New Comment)

The new haulroad design appears to be missing a haulroad for the first pit to be mined, in sec. 22 T.57N., R.84W. Is this an oversight or has a haulroad not yet been designed?

Response BJ 69 – Round 3 (New Comment)

A haulroad for pit TR-1 is currently not designed. With the uncertainty of the initial pit, the design has not been completed. The design will be provided prior to construction. No changes to the Mine Plan have been made in response to this comment.

Comment DM 6 – Round 1

Mine Plan, MP.3.1.3 – A primary haul road appears to cross the Tongue River using the bridge that is currently in place from previous mine usage. Please discuss any updates needed for that bridge to be adequate for the intended usage.

Response DM 6 – Round 1

The revised primary haul road alignments do not cross this bridge and the use of this bridge for haul trucks and other traffic associated with the mine is not planned. Updated Exhibit MP.3-1.

Comment DM 6 – Round 2

No comment received.

Response DM 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 7 – Round 1

Mine Plan, Exhibit MP4-3 shows Overburden Stockpiles OB-12 and OB-13, and Topsoil Stockpile TS-6 being located directly in the Slater Creek channel, without any mention of redirecting slater creek, or otherwise preventing the hydrologic consequences of damming up the creek with Overburden and Topsoil stockpiles. Please correct.

Response DM 7 – Round 1

Revised Exhibit MP.4-3 as requested with OB-12 and 13 as well as TS-6 moved out of slater creek channel.

Comment DM 7 – Round 2

No comment received.

Response DM 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 8 – Round 1

Mine Plan, MP.7 – Because of the proximity of the planned facilities primarily in T57, R84 Sec.15 to the Tongue River and Goose Creek, I would like to see surface water monitoring upstream of these facilities on Goose Creek and Tongue River, and downstream of these facilities on Tongue River. Please discuss the feasibility of fulfilling this request, with reasoning.

Response DM 8 – Round 1

Revised text as requested. Revise Exhibit MP.7-1 with USGS stream gage location that is within the viewing area.

Comment DM 8 – Round 2

No comment received.

Response DM 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 11 – Round 1

Mine Plan, 11) Depending upon the outcome of required overburden sampling, commitment for special handling of unsuitable overburden will be required to assure that placement of unsuitable materials so as not to hinder plant growth or to adversely affect surface or groundwater quality will be required in the Mine Plan.

Response DS 11 – Round 1

See section MP.4.6.1, fourth paragraph.

Comment DS 11 – Round 2

Response is not adequate. Section MP.4.1.6 does not discuss placement of unsuitable materials above groundwater sources which will undoubtedly be encountered in early mining progressions at this mine. Unsuitable materials taken from above the groundwater level cannot be placed within the groundwater zone. Please address this and describe how the mine plan pit sequence of removal and backfill will be altered to accommodate placement of suitable materials near the surface or in the aquifer zone during mining. This may require stockpiling of materials to assure the best quality materials will be used.

Response DS 11 – Round 2

The majority of the permit area is dry. Therefore, most backfill materials will not be placed in an aquifer. Additionally, it is generally accepted that if unsuitable materials are placed below the water table, there will not be cause for concern. If unsuitable materials are place below the water table, they will not have the opportunity to oxidize. If unsuitable materials are above the water table, they may oxidize, but they won't be transported by groundwater flow. The only zone that could potentially cause concern is the limited area where the potentiometric surface fluctuates. In this way, unsuitable materials can be oxidized and transported by groundwater flow. Due to the overburden and coal seams being primarily dry and the majority of mining activities occurring above the potentiometric surface, placement of unsuitable materials within an aquifer is not anticipated to be a concern.

Comment DS 11 – Round 3

No comment received.

Response DS 11 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 12 – Round 1

Mine Plan, 12) Does RAMACO provide a better detailed description of the topsoil salvage and handling process than that discussed in section MP.4.2.1? The

description provided is not detailed so as to provide a description of the equipment used, the methods for assuring adequate soil salvage, or whether topsoil and subsoil salvage will follow the recommendations in Appendix D7 for stockpiling topsoil separate from subsoil. (Map Unit A Cambira Loam, Map Unit B Zigweid Loam, Map Unit C Forkwood Loam, Map Unit G Bauxson Loam, Map Unit H Haverdad Loam, Map Unit U Ulm Clay Loam) Please understand that topsoil and subsoil may only be mixed if both meet Guideline 1 suitability criteria. Please include more detail for topsoil salvage and handling or let the LQD know where the information may be accessed.

Response DS 12 – Round 1

Revised text as requested.

Comment DS 12 – Round 2

Response is not adequate. Details of your topsoil salvage operation have not been adequately provided in the Mine Plan. Please provide the requested details of the topsoil salvage operation as stated above.

Response DS 12 – Round 2

The text in Section MP.4.2.1 has been supplemented to describe the topsoil salvage operation in more detail. The text now states that RAMACO will likely salvage topsoil with dozers, loaders, and trucks based on the current plan for equipment purchase. However, planning is still in its infancy and different, though typical, topsoil salvage equipment could be used. Methods to assure accurate salvage were already outlined in Section MP.4.2.1 in the three bulleted steps provided by WDEQ/LQD Guideline 1. However, these were supplemented with examples. Drilling or test pits ahead of salvage will ensure proper topsoil removal. Equipment operators and qualified personnel will be trained to recognize the difference in soil profiles. Additionally, Section MP.4.2.1 now states that RAMACO will generally follow the recommendations of Appendix D7 for the separation of topsoil and subsoil to ensure that unsuitable subsoil will not be mixed with topsoil. However, RAMACO reserves the right to mix topsoil and subsoil, if subsoil is suitable as a plant-growth medium, according to WDEQ/LQD R&R Chapter 4, Section 2(c). For example, Map Unit A, Map Unit B, Map Unit C, Map Unit H, and Map Unit U are all suitable across the entire profile (topsoil and subsoil) and are not required by rules and regulations to be separated. Therefore, RAMACO will not have separate stockpiles for subsoil. If subsoil is suitable, it will be salvaged. If subsoil is not suitable, it will not be salvaged. Any suitable subsoil that is salvaged will be mixed into topsoil stockpiles.

Comment DS 12 – Round 3

Response is not adequate. The LQD will allow mixing of suitable and unsuitable soil/subsoil if the resulting mix is suitable or only slightly marginal. Chapter 4, Section 2(c)(iii) provides the Administrator with the ability to require segregation of topsoil and subsoil if the Administrator determines that the practice is necessary for

vegetation establishment. However, the subject of this comment was to provide more detail about the methods that will be employed by the company and equipment operators to ensure adequate salvage will occur (color change in soils, staking with depths ahead of salvage, etc.). The LQD recommends that RAMACO review other approved permits for adequate topsoil/subsoil handling language in order to assure adequate detail is provided in the RAMACO permit application for topsoil handling.

Response DS 12 – Round 3

Section MP.4.2.1 has been revised to include details on staking prior to topsoil salvage operations. Data obtained during drilling and test pits ahead of stripping activities will be used to conduct depth staking on 500 foot grid centers. Section MP.4.2.1 includes other details describing adequately the topsoil salvaging procedures. A commitment has been added to the end of Section MP.4.3.1 to prevent overburden materials on native topsoil areas during overburden removal operations.

Comment DS 13 – Round 1

Mine Plan, 13) Section MP.4.2.3 all topsoil stockpiles, even those stockpiled temporarily or windrowed at the edge of a disturbance, must be identified by a topsoil sign from initiation of the salvage operation as required under Chapter 4, Section (c)(D) that states that signs must be in place at the time stockpiling is begun. Therefore, the text in the first paragraph of this section stating that signs will not be required must be corrected. Signs will always be required to identify all salvaged topsoil and must be placed on all approaches to the topsoil and no more than 150 feet from the stockpile location.

> a. Additionally, all stockpiled topsoil, even windrowed along the edge of a disturbance, must be protected against wind and runoff erosion, compaction or potentially toxic materials no matter what the longevity designation of the stockpiled material. The Mine Plan must provide a commitment to these requirements.

Response DS 13 – Round 1

Revised text as requested.

Comment DS 13 – Round 2

No comment received.

Response DS 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 14 – Round 1

Mine Plan, 14) Section MP.4.2.4(4.2.1?) does not discuss topsoil salvage during winter months. Salvage during the winter months, especially of shallow soil profiles, is discouraged by the LQD due to a lack of depth control caused by varying depths of permafrost. Please provide discussion concerning this subject.

a. Even short term and temporary topsoil stockpiles must be identified on maps and the volumes accounted for in annual reports. Several criteria that must be considered are well established for placement of topsoil stockpiles and include:

i. Construction of stable areas to minimize wind and water erosion

ii. Stockpiles will not be placed in areas where runoff water can contribute to the loss of topsoil (side hills or drainages)

iii. Stockpiles will not be constructed on unsuitable backfill locations

iv. Stockpiles will have associated sediment control established in advance of construction

v. Stockpiles will not be constructed at locations of known cultural or wildlife resources for which protection or mitigation is required.

b. Other topsoil stockpile construction and maintenance considerations include:

i. Stockpiles will be constructed with slopes of 3h:1v or less

ii. Bypass ditches, berms or equivalent may be used to divert runoff around stockpiles

iii. Stockpiles that will remain for less than 1 year may be revegetated or treated with surface roughing methods such as ripping or discing to reduce runoff and wind erosion potential.

Response DS 14 – Round 1

Revised text as requested.

Comment DS 14 – Round 2

Section MP.4.2.1 does not discuss topsoil salvage during winter months. Salvage during the winter months, especially of shallow soil profiles, is discouraged by the LQD due to a lack of depth control caused by varying depths of permafrost. Please provide discussion concerning this subject.

a. Even short term and temporary topsoil stockpiles must be identified on maps and the volumes accounted for in annual reports. Several criteria that must be considered are well established for placement of topsoil stockpiles and include:

iii. Stockpiles will not be constructed on unsuitable backfill locations

v. Stockpiles will not be constructed at locations of known cultural or wildlife resources for which protection or mitigation is required.

Responses to the above items were not adequate. Please provide the required permit commitments.

Response DS 14 – Round 2

A statement to Section MP.4.2.1 has been added that states RAMACO will not salvage topsoil if high antecedent moisture conditions have led to deep frost cementing topsoil to overburden. Additionally, the statement has been made that RAMACO will salvage topsoil ahead of planned winter mining activities to avoid complications with deep frost.

All currently planned topsoil stockpiles have been identified on Exhibit MP.4-3. A statement has been added to Section MP.4.2.3 in the first paragraph that any accumulations of topsoil that meet the definition of a stockpile will be mapped with volumes accounted for in the Annual Report. Another statement has been added to the first paragraph of Section MP.4.2.3 that topsoil stockpiles will not be constructed on unsuitable backfill or known locations of cultural or wildlife significance that require protection and mitigation.

Comment DS 14 – Round 3

No comment received.

Response DS 14 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 15 – Round 1

Mine Plan, 15) Section MP.4.2.7, page MP 4-5. Aside from operation of soil salvage equipment with the potential for soil contamination due to blown hydraulic hoses or small fuel leaks, the LQD expects not contamination of soil during the mining operation. Contamination of subsoil and overburden is more likely. The LQD recommends that RAMACO re-phrase the section header and text to show petroleum contaminated materials being and not soils.

a. What criteria will RAMACO use to determine if spills require reporting to the DEQ, and what process will be used in spill reporting?

b. What will the operational procedure be for management of the proposed on-site landfarm for contaminated materials, and where will it be located? Will it be identified on the ground by a sign?

Response DS 15 – Round 1

Revised text as requested.

a. See Section MP-4.5.2 of Addendum MP-4
b. See Section MP-4.5.3 of Addendum MP-4

Comment DS 15 – Round 2

No comment received.

Response DS 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 16 – Round 1

Mine Plan, Section MP.4.2.8. Please provide a detailed description for the disposal of empty drums, not just a citation of the EPA Rule which is probably not know by most readers of this public document.

Response DS 16 – Round 1

The EPA Code Federal Regulation cited is public information which may be accessed online or at a public library if the reader desires to know the specifics requirements and steps regarding container disposal.

Comment DS 16 – Round 2

Response is not adequate. The Round 1 review comment was not addressed. Please provide the required detail in the drum disposal discussion. The general public may or may not have access to the Federal Register, but must provide a public document which stands alone, without need to reference other documents to provide the information required to explain the commitments made. Therefore, RAMACO must expand on what the EPA Rule requires for the readers of this permit.

Response DS 16 – Round 2

RAMACO has committed to disposing of empty drums according to Title 40 CFR Part 261.7. RAMACO has cited the federal regulation that stipulates the disposal of empty containers. RAMACO will not summarize this federal regulation in the Brook Mine Permit for two reasons:

1. Federal regulations are made public. Any member of the public has access to the Code of Federal Regulations. This regulation was accessed by WWC on the

internet, meaning any person with access to the internet can search and find this regulation. If a member of the public does not personally have access to the internet, said person can go to the local public library to obtain access to the internet.

2. The Code of Federal Regulations is a living document that is subject to change at any time. By committing to the stipulations of Title 40 CFR Part 261.7 without summarizing the regulation, RAMACO commits to observing any requirements of the regulation at any time no matter how the regulation might change in the future. If RAMACO summarizes the regulation and the regulation changes in the future contrary to what it originally stipulated, RAMACO will be automatically stating commitments contrary to federal regulation. The possibility of being out of compliance with federal regulation is avoided by simply citing the regulation RAMACO commits to observing.

Addendum MP-4 remains unchanged.

Comment DS 16 – Round 3

No comment received.

Response DS 16 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 17 – Round 1

Mine Plan, MP.4.3.1 discusses overburden removal processes. However, little detail is given to explain the actual process for overburden handling. Will the first cut be stockpiled and used to fill the last cut? When special handling is required, which is almost certain given the nature of some overburden and the need for some soil replacement materials, what assurance will be made that poor quality materials will be safely located in the backfill or in separate stockpiles, or that topsoil substitutes will be handled and stored as topsoil in a useful manner as required under Chapter 4, Section 2(b)(x)(A)? Please provide a more detailed overburden handling plan. Perhaps some of these details are observed in later sections. Please provide additional details not provided elsewhere.

Response DS 17 – Round 1

See Sections MP.4.3.5, MP.4.6 and MP.4.7. Revised text as requested.

Comment DS 17 – Round 2

No comment received.

Response DS 17 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 18 – Round 1

Mine Plan, Section MP.4.3.4. The volumetric analysis shown in Table MP.4-4 and MP.4-5 may change depending on results of required additional overburden sampling and volumetric analysis. If the overburden depth overlying coal changes as a result of additional sampling, the volumetric analysis will also change. If post mining contour changes are necessary due to adjusted swell factors permit revision will probably not be required until the changed PMT exceeds plus or minus 20 feet of the approved at which time a Reclamation Plan revision will be required. This kind of detail should be included in the permit commitments.

Response DS 18 – Round 1

Revised text as requested.

Comment DS 18 – Round 2

Response is not adequate. Does the volumetrics of stockpiles include the coal partings and heavily oxidized coal seams that will not be mined for sale and have not been included in overburden quality assessment data? Will swell factors be adequate to meet PMT requirements after mining of coal from box cuts? What steps will be taken, such as borrow areas not currently shown on any maps, would be used to mitigate inadequate backfill, keeping in mind that contouring must provide reestablishment of drainage patterns on the mine.

Response DS 18 – Round 2

The volumes of materials required to be placed in stockpiles were calculated from grid files in AutoCAD. The grid files are based on borehole/exploration hole data. These volumes were then increased by 16% (as stated in Section MP.4.3.4) to account for swell. In response to Comment DS 22 – Round 2, the topsoil volumes have been recalculated using the specified depths in Appendix D7 within each soil polygon. In most of these cases, the salvage depth of topsoil was increased from 0.5 feet to nearly 1.5 feet (or whatever the appropriate salvage depth was in the specific area). This significantly increased the volume expected to be placed in topsoil stockpiles. However, that volume that was originally assumed to be overburden that is now in topsoil stockpiles was not removed from the overburden stockpiles. Therefore, the volumes shown for overburden stockpiles should be slightly high. This will provide for additional storage of coal partings or materials from heavily oxidized coal seams should such volume requirements be necessary. The overestimate of overburden stockpile size is conservative. This simply shows that the mine does have the capability to store all the overburden materials. It is unnecessary to readjust overburden stockpiles to be smaller after topsoil calculations since this material was planned to be placed during reclamation.

As stated in Section MP.4.3.4, the actual swell factors will be monitored. Also stated in Section MP.4.3.4, if the actual swell factors differ significantly from what is

approved, the post mining topography will be adjusted. This is standard practice for coal mines, and RAMACO is prepared to meet this obligation. RAMACO cannot be certain what the swell factors will be until after material is excavated, stockpiled, handled, and reclaimed. Once the material is monitored and volumes of swelled material are better known, this data will be reported in the Annual Report, as stated in Section MP.4.3.4.

In reference to the PMT, please refer to the Reclamation Plan. As shown in Exhibit RP.3-1, all drainage patterns were maintained. Any borrow to tie the PMT into the existing ground occurred within the disturbance boundary. Because of the relatively minimal disturbance by the Brook Mine, reclaiming the surface to nearly premining conditions was relatively simple. Again, should the swell factor vary significantly from what is currently assumed, the PMT will be redone to account for this adjustment and should any additional borrow areas be required, the disturbance boundary will be increased.

Comment DS 18 – Round 3

No comment received.

Response DS 18 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 19 – Round 1

Mine Plan, Section MP.4.6.1. The typical overburden sampling protocol as stated in Guideline 1 calls for one sample taken every 40 square acres of the permit area. Overburden sampling for underground mining operations differs from typical coal mine sampling protocols and is stated in the Coal Rules, Chapter 7, Section 1(a)(i)(A) which calls for overburden sampling and characterization on areas where surface operations will cause removal of overburden down to the level of the coal seam. Please make changes to the text accordingly and perform additional overburden sampling where required.

Response DS 19 – Round 1

Revised text as requested.

Comment DS 19 – Round 2

No comment received.

Response DS 19 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 20 – Round 1

Mine Plan, Section MP.4.3.5. A statement was made in this section that "Overburden stockpiles will only block ephemeral drainages if runoff control and sediment control measures are made and approved by WDEQ/LQD." Placement of overburden in ephemeral drainages will require a discussion of how water will be diverted around the overburden stockpile to prevent impoundment of water in addition of a discussion of sediment control measures for the stockpile to prevent of-site impacts of erosion down-slope from the stockpile. The LQD recommends that no overburden stockpiles be placed in ephemeral drainages.

Response DS 20 – Round 1

Revised Exhibit MP.4-3.

Comment DS 20 – Round 2

Response is not adequate. No response was provided. Please make necessary changes to the Mine Plan language concerning placement of overburden stockpiles.

Response DS 20 – Round 2

The statement reflects the allowances made by WDEQ/LQD rules and regulations. The statement was not made as a certainty that overburden piles will be placed in ephemeral drainages. Instead, the statement is provided in case overburden piles have to be placed in ephemeral drainages and provides the guidance as to how this will be done according to WDEQ R&R. WDEQ/LQD R&R Chapter 4, Section 2(c)(xi)(B) states:

"Ephemeral drainages may be blocked if environmentally sound methods for dealing with runoff control and sedimentation are approved by the Administrator."

The Mine Plan currently states in Section MP.4.3.5 in the first paragraph:

"Overburden stockpiles will only block ephemeral drainages if runoff control and sediment control measures are made and approved by WDEQ/LQD."

"…runoff control and sediment control measures are made and approved by WDEQ/LQD" implies that if an overburden stockpile blocks an ephemeral drainage, discussion and approvals by WDEQ will be made for diverting water, use of ASCMS, prevention of down-slope impacts, etc. before the placement of the stockpile. Because the permit text meets WDEQ/LQD R&R, no changes have been made to the text.

As shown in Exhibit MP.5-1, all of the overburden stockpiles avoid being placed such that they block ephemeral drainages. All ephemeral drainages flow around the stockpiles. However, the statement remains in the permit should RAMACO be required to block an ephemeral drainage and seeks the permission and approval of WDEQ/LQD, as allowed by WDEQ/LQD R&R Chapter 4, Section 2(c)(xi)(B).

Comment DS 20 – Round 3

No comment received.

Response DS 20 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 21 – Round 1

Mine Plan, Tables MP.1-1, MP.1-2 and MP.4-1 must show the actual years for proposed progressions, or the year 1 progression must be tied to a specific year in the Mine Plan text.

Response DS 21 – Round 1

Revised tables as requested. Added note saying that Year 0 corresponds to the year 2016.

Comment DS 21 – Round 2

No comment received.

Response DS 21 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 22 – Round 1

Mine Plan, Tables MP.4-3 and MP.4-5. Topsoil volumes appear to be underestimated in TS- 2, TS-6, TS-10 and TS-11 while underestimating the proposed volume in TS-1. Also overburden volumes appear to be underestimated in OB-4, OB-7, OB-11, OB-14 and OB-15, and overestimated in OB-16, which may affect estimates presented in Table MP.4-4 as well.

Response DS 22 – Round 1

Volumes are estimated based on the stripping volumes and available backfill area with excess material going to and from stockpile for contemporaneous reclamation. No updates will occur in response to this comment.

Comment DS 22 – Round 2

Response is not adequate. Several discrepancies have been discovered during the review. TS-1 capacity according to Table MP.4-3 is 89,600 cubic yards, but Table MP.4-1 shows 120,200 cubic yards added to the stockpile. Our estimate are significantly different from yours based on the footprint and average height.

Stockpile	Basal Area (acres)	Average Height (ft)	Volume Estimate (cy)	RAMACO's Volume Estimate (cy)
TS1	1.4	20	22,587	89,600
TS2	3.5	45	127,051	85,100
TS3	1.5	30	36,300	70,300
TS4	1.1	25	22,183	26,600
TS5	3.0	55	133,101	98,400
TS6	4.5	45	163,351	150,800
TS7	0.7	20	11,293	13,800
TS8	0.9	25	18,150	19,300
TS9	0.8	20	12,907	15,900
TS10	2.0	50	80,667	70,300
TS11	0.9	20	14,520	12,000

The volume of topsoil in stockpiles by year presented in Table MP.4-1 appears to be based on a six-inch salvage depth as shown below. Perhaps the salvage depth was intended to be 2 ft. but the volumes would have to increase by a factor of 4.

Stockpile	Acres Salvaged	Volume Salvaged (cy)	Depth (ft) (Volume (cu.ft./Area (sq.ft.))
TS1	80	64,500	0.50
TS1	43	34,700	0.50
TS1	23	18,600	0.50
TS1	13	10,500	0.50
TS1	19	15,300	0.50
TS1	5	4,000	0.50
TS1	9	7,300	0.50

The LQD requires RAMACO to evaluate topsoil stockpile volumes and depths of soil salvage expressed on specific areas of disturbance since each disturbance will undoubtedly result in different salvage and replacement depths.

All volumetric data in tables presented in the Mine Plan and in the reclamation bond estimate must be must be correct, so the LQD requires that:

a) All topsoil salvage and bond estimates must be based on depth estimates provided in Appendix D7 and the approximate acreage of each soil series disturbed. Therefore, the soil salvage depth and topsoil volumes expressed in table MP.4-3 must be linked to site-specific soil depths. Table MP.4-1 must also include salvage depths for each calculation.

b) All following topsoil salvage and volumetric tables must be corrected based on volumes for TableMP.4-1.

c) All reclamation performance bond estimates must be changed to reflect corrected topsoil volumes.

d) An average depth of topsoil to be salvaged for the entire mining operation must be provided in the Mine Plan text.

e) Topsoil stockpile footprints and heights will need to be corrected on tables and figures.

Response DS 22 – Round 2

Responses to the list of WDEQ/LQD requests are as follows:

a) Topsoil salvage estimates were updated to reflect the salvage depths of specific soil types in Appendix D7. To accomplish this, the soil polygons in Appendix D7 Exhibit D7.3-1 were used to create a 3D grid in AutoCAD that represented the salvage depth for each soil type. Volumes were then "removed" within each topsoil stripping area shown in Exhibit MP.4-2. Outputs from AutoCAD included the average cut depth within each topsoil stripping area. The average cut depth essentially reflects the weighted average of cut depths depending on recommended salvage depth of each soil and the areal extent of each soil type within the stripping areas. The average cut depth is now provided in Table MP.4-1. Again, this depth reflects a weighted average and will not match the recommended salvage depths in Appendix D7. To reflect what topsoil types will be salvaged in each stripping area, the soil polygons shown on Exhibit D7.3-1 were added to Exhibit MP.4-2 which already shows the topsoil stripping areas. This exhibit can be compared to Table MP.4-1 for volume calculations.
b) Table MP.4-1, Table MP.4-2, and Table MP.4-3 were all updated to show the corrected topsoil volumes.
c) The weighted average of salvage depth is provided in the Mine Plan text in Section MP.4.2.1 in the second paragraph.
d) The topsoil stockpile footprints and heights have been corrected on Table MP.4-3 to reflect the new volumes. Please note: Stockpile heights are only averages. The stockpile height varies considerably for most stockpiles because of the nature of the topography in the Brook Mine permit area. When AutoCAD builds the 3D stockpiles, the topography is taken into account for the areal extent of the base. Therefore, hand calculations will unlikely replicate the volumes of stockpile by only considering basal area, average height, and typical side slope. To reflect the change in the topsoil stockpile footprints, the disturbance boundary was updated in Exhibits MP.1-1, MP.4-1, MP.4-2, MP.4-3, MP.4-4, MP.4-5, MP.5-1, MP.5-2, and MP.16-1. The hatches that represent the stockpile footprints were updates in Exhibit MP.4-3 and Exhibit MP.5

Comment DS 22 – Round 3

No comment received.

Response DS 22 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 23 – Round 1

Mine Plan, Exhibit MP.4-2 and MP.4-3 must show the dates (actual years) for the salvage of topsoil and removal of overburden, or year 1 must be tied to an actual year when operations will begin (2016, 2017, etc.). The map or tables in the Mine Plan must provide proposed years and volumes for stockpile construction as well.

Response DS 23 – Round 1

Revised Exhibits as requested. Added note saying that Year 0 corresponds to the year 2016 on all Exhibits with years.

Comment DS 23 – Round 2

No comment received.

Response DS 23 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 30 – Round 1

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30 – Round 1

Revised Exhibits as requested.

Comment DS 30 – Round 2

No comment received.

Response DS 30 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 32 – Round 2 (New Comment)

The LQD requests that RAMACO provide pit identification number/names for all proposed initial box cut locations which will reduce confusion for identification of incident locations or for descriptions during inspections. (DS)

Response DS 32 – Round 2 (New Comment)

Exhibits MP.1-1, MP.4-1, MP.4-4, MP.5-1, MP.15-1, and MP.15-2 were all updated to include pit identification numbers. The text in Section MP.6.1 was also updated to include pit identification numbers to more conclusively identify pits in the hydrologic consequences discussion.

Comment DS 32 – Round 3

No comment received.

Response DS 32 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DE 1 – Round 1

Mine Plan, Figure MP.1.2 and page MP-3 – MSHA and best practices may require a safety berm on this safety bench which could require a wider bench. Figure MP.1.2 notes a minimum of 35' but the text on page MP-3 just states the bench will be 35' wide. There is a real possibility this safety bench might be used for light plants so it may need to be wider for access and small vehicle use as well as providing a safety bench.

Response DE 1 – Round 1

Revised text as requested.

Comment DE 1 – Round 2

No comment received.

Response DE 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 2 – Round 1

Mine Plan, Table MP.1-1 – The total disturbance doesn't seem to match the overall disturbance listed for the trench mining and facilities. Please explain or correct.

Response DE 2 – Round 1

Revised table as requested.

Comment DE 2 – Round 2

No comment received.

Response DE 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 3 – Round 1

Mine Plan, Section MP.2.3, page MP-9 – The 1st sentence would be better if it started, "The explosive materials…". The 2nd sentence should replace the word "detonating" with "explosive". The 5th sentence in the 2nd paragraph should include cast boosters. The 6th sentence in the 2nd paragraph should discuss storage of emulsions, water gels, and slurries also. This section should also commit to proper signage of the explosive storage area. Please correct.

Response DE 3 – Round 1

Revised text as requested.

Comment DE 3 – Round 2

The third sentence in the 2nd paragraph needs to be corrected. It states one magazine will contain cast boosters and the other magazine will contain detonating cod and boosters. Boosters cannot be stored with detonating cord or detonators. I believe the text should say, "…the other magazine …will contain detonating cord, detonators and other initiation products. Please correct.

Response DE 3 – Round 2

The third sentence of the second paragraph in Section MP.2.3 was changed as suggested to reflect that boosters will be stored separately from detonating cord, detonators, and other initiation products.

Comment DE 3 – Round 3

Response adequate.

Comment DE 4 – Round 1

Mine Plan, Section MP.5.7.5, page MP-34 – The word "of" in the 2nd line of the last paragraph should be "or". Please correct.

Response DE 4 – Round 1

Revised text as requested.

Comment DE 4 – Round 2

No comment received.

Response DE 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 5 – Round 1

Mine Plan, Section MP.6.1, page MP-39 – The 1st sentence of the 1st full paragraph needs some improvement so it reads properly and makes sense. Please correct.

Response DE 5 – Round 1

Revised text as requested.

Comment DE 5 – Round 2

The 1st sentence of the 1st full paragraph still needs to be improved so it makes sense. The current version says "… Hidden Water Creek watershed will occur…" It doesn't make sense as it is written. Please correct.

Response DE 5 – Round 2

The text was corrected in the fourth paragraph of Section MP.6.1 to state:

"In the fourth and fifth years, mining occurs east of the Slater Creek watershed and west of the Hidden Water Creek watershed. Mining will occur primarily in minor drainages of the Tongue River in Sections 8, 17, and 18, T57N, R84W, as seen on Exhibit MP.1-1."

Comment DE 5 – Round 3

Response adequate.

Comment DE 6 – Round 1

Mine Plan, Section MP.14.2, page MP-55 – The 2nd paragraph discusses the use of "cast primers". The term should be "cast boosters" as it doesn't become a primer until the detonator is added or detonating cord is attached to it. The discussion of priming holes should describe the use of a cast booster and how it is made-up to become a primer, i.e. with detonating cord or a detonator (blasting cap). Please correct.

Response DE 6 – Round 1

Revised text as requested.

Comment DE 6 – Round 2

No comment received.

Response DE 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 7 – Round 1

Mine Plan, Section MP.14.3.2, page MP-56 – In the 2nd line the item "(primer with detonator)" should be changed to "(cast booster with detonator)". Please correct

Response DE 7 – Round 1

Revised text as requested.

Comment DE 7 – Round 2

No comment received.

Response DE 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 8 – Round 1

Mine Plan, Section MP.14.3.2, page MP-56 – The 2nd paragraph discusses powder factors in coal and overburden and the high end of the ranges is extremely high for the type of rock and coal in this area. RAMACO should eliminate the range and simply state powder factors will be adequate to effectively fragment the overburden and coal.

Response DE 8 – Round 1

Revised text as requested.

Comment DE 8 – Round 2

RAMACO kept the powder factor range of 0.2-0.7 pounds per ton in the text. As stated in the 1st round review the high end of the range is extremely high for coal. I would recommend that the text simply state that the powder factors will be adequate to effectively fragment the coal and overburden. Please correct.

Response DE 8 – Round 2

In Section MP.14.3.2, the powder factor ranges for coal and overburden were removed as suggested. The text now states that the powder factors will be chosen to adequately fragment coal or overburden, depending upon which is being blasted.

Comment DE 8 – Round 3

Response adequate.

Comment DE 9 – Round 1

Mine Plan, Section MP14.3.3, page MP-56 – RAMACO should reword this to say that initiation will be done using non-electric or electric systems, which may include electronic detonators, shock tube detonators, detonating cord, electric detonators or a

combination of these. Igniter cord is used to initiate safety fuse and it's highly unlikely that any safety fuse will be used at this mine. Please correct.

Response DE 9 – Round 1

Revised text as requested.

Comment DE 9 – Round 2

No comment received.

Response DE 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 10 – Round 1

Mine Plan, Section MP.14.4, pages MP-56 & 57 – It is probable that emulsions will also be stored on site so it should be mentioned since emulsion/ANFO blends are the most widely used product in wet holes. Please correct.

Response DE 10 – Round 1

Revised text as requested.

Comment DE 10 – Round 2

No comment received.

Response DE 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 11 – Round 1

Mine Plan, Section MP.14.6, pages MP-57 & 58 – Residents who request a pre-blast survey must make the request to the permittee and the Administrator of Wyoming Land Quality Division (LQD). The permittee is responsible for getting the pre-blast survey done and distributed to the person that requested it and the LQD Administrator. Please correct.

Response DE 11 – Round 1

Revised text as requested.

Comment DE 11 – Round 2

No comment received.

Response DE 11 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 12 – Round 1

Mine Plan, Section MP.14.7, pages MP-58 & 59 – LQD will not approve protecting uninhabited structures (what LQD refers to as engineered structures) at 8.0 inches per second (ips) of peak particle velocity. LQD would allow a maximum limit of 5.0 ips. RAMACO would have to assure that this limit was not exceeded by the use of a seismograph at these structures on all blasts. RAMACO could apply for a modified scale distance factor to show compliance with this limit of 5.0 ips by submitting a vibration study and doing a regression analysis to show the allowable ppv is not exceeded at a 95% confidence level. However, this will require the vibration study be submitted with seismograph records from shots in the mining area so it cannot be done until after some blasting has been done at the mine. Please correct this text.

Response DE 12 – Round 1

Revised text as requested.

Comment DE 12 – Round 2

No comment received.

Response DE 12 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 13 – Round 1

Mine Plan, Section MP.14.8.1, page MP-60 – The discussion on typical pattern size should be changed to more general language. Using the parameters given the powder factor used would be approximately 0.16 lbs./CY using ANFO and in the 0.23-0.25 lbs./CY range when shooting an emulsion blend. These powder factors are not high enough to adequately fragment the overburden. Please correct.

Response DE 13 – Round 1

Revised text as requested.

Comment DE 13 – Round 2

RAMACO continues to discuss a "typical" pattern size and stemming amount. Given the bench height, pattern size, stemming height, hole diameter listed it would be nearly impossible to get powder factors high enough to adequately fragment the overburden. The large burdens and spacings in a 50' high bench would likely leave hard zones between the holes. The large amount of stemming compared to powder

column height gives poor powder distribution in the holes which will likely lead to hard zones in the upper portions of the bench. This discussion needs to be improved.

Response DE 13 – Round 2

The text in Section MP.14.8.1 has been edited to discuss generalities in overburden blast design as opposed to listing the specifics of before. The text now provides more open design standards for RAMACO to function as necessary for safe and efficient blasting during mining operations.

Comment DE 13 – Round 3

Response adequate.

Comment DE 14 – Round 1

Mine Plan, Section MP.14.8.1, page MP-60 – The 2nd paragraph says if water is in the holes a slurry or water gel explosive will be used. Most likely an emulsion/ANFO blend with good water resistance will be used in wet holes and not a slurry or water gel. Please correct.

Response DE 14 – Round 1

Revised text as requested.

Comment DE 14 – Round 2

No comment received.

Response DE 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 15 – Round 1

Mine Plan, Section MP.14.8.1, page MP-60 – The 3rd paragraph discusses the explosive weight per hole and the powder factors. The explosive densities listed are correct but the pounds per hole and powder factors are incorrect. In a 7.875" hole and with a density of ANFO of 0.85 g/cc the pounds/foot of hole is 17.95 lbs. and with 24' of powder column the pounds/hole is 431 lbs., making the powder factor = 0.16 lbs./CY. Similarly using an emulsion blend of 1.32 g/cc the pounds/foot = 27.87 lbs. and the pounds per hole would be 669 lbs. so the powder factor =o.25 lbs./CY. In the 50' hole described with 26' of stemming and 24' of powder the powder distribution is poor so it would likely lead to blocky material near the top of the bench. Please correct.

Response DE 15 – Round 1

Revised text as requested.

Comment DE 15 – Round 2

No comment received.

Response DE 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 16 – Round 1

Mine Plan, Section MP.14.8.2, page MP-61 – Drilling a 35' x 35' pattern in a 15' thick coal seam with a 7.875" hole and 4.5' of stemming will probably result in excessive flyrock, stemming ejection, high airblast and hard zones between the holes. Expecting to stem 4.5' is not realistic – in the field the blaster is going to try to hold for 4' or 5' of stemming. Again RAMACO discusses using slurry or water gel in wet hole when an emulsion/ANFO blend with high water resistance would probably be used. Please correct. Also the powder factor listed for coal is probably a little high so it would be better to just say that the powder factor will sufficient to fragment the coal for the prime movers. Please correct.

Response DE 16 – Round 1

Revised text as requested.

Comment DE 16 – Round 2

RAMACO lists a pattern Drilling size of 35' x 35' and then in the text states the burden and spacing will 17.4' and 35.4'. As stated in the round 1 review comments, this pattern size in a 15' thick coal seam with a 7.875" drill hole will probably result in excessive flyrock, airblast and leave behind hard zones between the holes. The 2nd paragraph discuses using slurry and water gel and it is likely that an emulsion/ANFO blend with high water resistance would be used. RAMACO needs to revise the text in this section because this plan will not be effective.

Response DE 16 – Round 2

The text in Section MP.14.8.2 has been edited to discuss generalities in coal blast design as opposed to listing the specifics of before. The text now provides more open design standards for RAMACO to function as necessary for safe and efficient blasting during mining operations.

Comment DE 16 – Round 3

Response adequate.

Comment DE 17 – Round 1

Mine Plan, Section MP.14.10, page MP-63 – The last bullet item says that detonation during electric storms might be a reason for unscheduled blasting. This is confusing

because it makes it sound like the operator would shoot during electric storms and the only safe thing to do when an electric storm approaches is clear the pattern and keep everyone a safe distance away until the storm passes. Please correct.

Response DE 17 – Round 1

Revised text as requested.

Comment DE 17 – Round 2

No comment received.

Response DE 17 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 18 – Round 1

Mine Plan, Addendum MP-7, Blaster's Log – Under the "Holes" heading RAMACO should use "burden" not the term "burden spacing". On the 2nd page the word "signiture" should be changed to "signature". Please correct.

Response DE 18 – Round 1

Revised text as requested.

Comment DE 18 – Round 2

No comment received.

Response DE 18 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 11 – Round 2 (New Comment)

LQD recommends that sequence maps be revised to include only yearly backfilling and/or replacement, monthly backfilling and/or replacement areas may not be achievable as a permit commitment.

Response KM 11 – Round 2 (New Comment)

RAMACO appreciates the comment and understands the potential difficulty, but the permit remains unchanged.

Comment KM 11 – Round 3

No comment received.

Response KM 11 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 12 – Round 2 (New Comment)

Exhibit MP.1-1 shows surface disturbance beginning in 2017. However, other maps show disturbance beginning in Year "0", which according to the maps is Year 2016. Please be consistent.

Response KM 12 – Round 2 (New Comment)

Exhibit MP.1-1 has been corrected to properly show surface disturbance beginning in 2016.

Comment KM 12 – Round 3

No comment received.

Response KM 12 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 13 – Round 2 (New Comment)

Exhibits MP.4-2 and RP.5-1 use the same symbol for all years of activities; only color designates different years. Some of the color variations denoting years are not easily discernible from the legend to the map.

Response KM 13 – Round 2 (New Comment)

The exhibits have been changed to use different hatch patterns and colors for years to make separate years more easily discernible.

Comment KM 13 – Round 3

No comment received.

Response KM 13 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 14 – Round 2 (New Comment)

Do the slot openings include truck ramps? How will truck ramps be constructed in each slot?

Response KM 14 – Round 2 (New Comment)

The slot openings will include truck ramps that will be used to remove spoil and coal from the slots to the haul roads. By WDEQ/LQD definition in Chapter 1, Section

2(ds), ramps are not considered roads. As discussed in Section MP.3.1.4, ramps are exempt from mine plan design considerations. The ramps will move and change frequently as mining progresses. To describe a specific way in which the truck ramps will be constructed in each slot would be difficult to accomplish due to the variability in each slot and at each phase of construction of the slot. As Section MP.3.1.4 states, the ramps will be developed with consideration given to the type of equipment operating on them, safety considerations, and surrounding conditions. Safety berms will be installed on all elevated edges.

Comment KM 14 – Round 3

No comment received.

Response KM 14 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 15 – Round 2 (New Comment)

Please confirm the volume of the overburden stockpiles. For example, based on LQD's review of the mine plan and the spoil backfilling sequence maps, it appears that OB-3 will be used to contain all overburden removed from the first slot opening.

Response KM 15 – Round 2 (New Comment)

Please see response to Comment BJ 67. WDEQ/LQD calculations did not consider the side slope of overburden stockpiles, therefore overestimating the volume of overburden stockpiles. Overburden stockpile volumes will be constantly changing over the course of mining due to ongoing reclamation activities. The overburden stockpiles have been sized to accept the required volume of spoil from the trenches, but spoil will likely be cycled in and out of the stockpiles on a regular basis to meet backfilling requirements. Volumes to be placed in stockpiles were calculated from 3D grid files in AutoCAD and given a swell of 16% to approximate the required space.

Comment KM 15 – Round 3

No comment received.

Response KM 15 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 16 – Round 2 (New Comment)

LQD recommends using a swell factor of 11 to 13%, based on our experience in the area.

Response KM 16 – Round 2 (New Comment)

A swell factor of 16% was used as an average approximation. Swell factors of material at other mines in the area have been as high as 20%-22%. After the first pit has been backfilled, a swell study will be conducted and stockpile and PMT design will be reevaluated if necessary. Refer to Section MP.4.3.4 for a discussion that states that actual swell factors will be monitored and PMT will be adjusted if necessary.

Comment KM 16 – Round 3

No comment received.

Response KM 16 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 19 – Round 2 (New Comment)

Page MP-8 states that the "approved Spill Prevention, Control, and Countermeasure (SPCC) plan will be on file with WDEQ and available at the Brook Mine. Who is responsible for approving the plan? WDEQ does not require a SPCC plan to be filed with the agency. SPCC plans is a federal requirement.

Response KM 19 – Round 2 (New Comment)

The text in Section MP.2.1.4 was edited to correctly state that the SPCC plan will be kept onsite at the mine for review and inspection by the EPA.

Comment KM 19 – Round 3

No comment received.

Response KM 19 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 20 – Round 2 (New Comment)

Page MP-8 states that the leachfield(s) will accept water from the change house and equipment service shop. Discharge of industrial wastewater from the equipment service shop into a leachfield may be subject to Chapter 16, Wyoming Water Quality Rules and Regulations.

Response KM 20 – Round 2 (New Comment)

Section MP.2.1.6 states that sewage wastewater from the change house and equipment service shop will be discharged into the leach field. The section does not mention disposal of industrial wastewater into a leach field. However, a statement was added that the septic tank and leach field will be constructed in accordance with WDEQ/WQD rules and regulations.

Comment KM 20 – Round 3

No comment received.

Response KM 20 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 21 – Round 2 (New Comment)

Page MP-8 states that wash down water will be sent to a wastewater impoundment. However Section MP5.2 (page MP-26) state that no wastewater impoundments are currently planned for the Brook Mine. Please discuss.

Response KM 21 – Round 2 (New Comment)

The statement made in Section MP.5.2 that no wastewater impoundments are currently planned was revised to state that designs for a wastewater impoundment are provided in Addendum MP-2. A wastewater impoundment will be required to treat wash down water.

Comment KM 21 – Round 3

No comment received.

Response KM 21 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 22 – Round 2 (New Comment)

Groundwater from dewatering pumps is to be pumped to sumps or NPDES treatment for use in road dust control. What kind of "NPDES" treatment is proposed?

Response KM 22 – Round 2 (New Comment)

The third paragraph of Section MP.5.9 states that the treatment facilities will be sedimentation ponds.

Comment KM 22 – Round 3

No comment received.

Response KM 22 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 23 – Round 2 (New Comment)

The State of Wyoming has primacy for the National Pollutant Discharge Elimination System and issues permits under the Wyoming Pollutant Discharge Elimination

System (WYPDES). Please change all references to NPDES to WYPDES to accurately reflect the current regulatory situation.

Response KM 23 – Round 2 (New Comment)

The reference in the third paragraph of Section MP.5.9 to NPDES was removed. A statement was added that all water is intended to be used, and discharge from the permit area is not anticipated.

Comment KM 23 – Round 3

No comment received.

Response KM 23 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment MK 23 – Round 1

Mine Plan, Section MP.20 Alluvial Valley Floors, The discussion of underground mining in AVFs does not seem necessary given there is no plans for underground mining at the Brook Mine. Furthermore, it is conceivable that circumstances could exist where underground mining of an AVF would not be allowed by the LQD. For example, if the AVF was significant to farming and underground mining of the AVF would result in surface effects such that material damage to the AVF would occur. (MDK)

Response MK 23 – Round 1

While no underground mining is proposed within delineated AVFs, the mine maintains this option. If underground mining is ever planned under the AVF, the appropriate revisions will be made. Revised text as requested.

Comment MK 23 – Round 2

No comment received.

Response MK 23 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 46 – Round 1

Mine Plan, Section MP.4.1 Mining Sequence, 20. On Exhibit MP.4-1, please attempt to show the areas that would be highwall mined versus surface mined. These layers are currently not found until Exhibit MP.15-1. Alternatively, the text in this Section could specify that the areas to be highwall versus surface mined are shown in Exhibit MP.15-1. (MDK)

Response MK 46 – Round 1

Revised text as requested.

Comment MK 46 – Round 2

No comment received.

Response MK 46 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 47 – Round 1

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 21. Only Slater Creek and Hidden Water Creek are labeled and shown in Exhibit MP.5-1. In order to better evaluate the Hydrologic Control Plan, please provide labels and locations for the other stream channels, including Tongue River, Goose Creek, East Fork Earley Creek, and the other unnamed channels (as shown on the USGS 24K Quad) on the proposed permit area. (MDK)

Response MK 47 – Round 1

Revised Exhibit MP.5-1 as requested.

Comment MK 47 – Round 2

No comment received.

Response MK 47 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 48 – Round 1

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 22. Exhibit MP.5-1 shows overburden stockpiles OB-13 and OB-12, as well as topsoil stockpile TS-6, occurring directly over the Slater Creek channel. The Exhibit does not show any diversion ditches to be used in these locations. Please either move the location of the stockpiles or present a plan to use a diversion to route Slater Creek around the stockpiles. (MDK)

Response MK 48 – Round 1

Revised Exhibit MP.5-1 as requested.

Comment MK 48 – Round 2

No comment received.

Response MK 48 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 49 – Round 1

Mine Plan, Section MP.5.2 Sedimentation and Wastewater Impoundments, 23. Exhibit MP.5-1 shows the locations of two "sediment basins". Are these considered the same as "sedimentation impoundments", as discussed in this Section? If so, the designs for these two impoundments are not found within the Mine Plan. (MDK)

Response MK 49 – Round 1

The "sediment basins" shown in Exhibit MP.5-1 are not considered the same as the "sediment impoundments (reservoirs)." Sediment Basins are considered an Alternative Sediment Control Measure and are discussed in Addendum MP-1. As such, the design for these "sediment basins" are not included in the Mine Plan. However, the design criteria and construction standards for "sediment basins" are similar to those discussed within Section MP.5.2 of the Mine Plan. Revised text as requested.

Comment MK 49 – Round 2

Response accepted. The text states that there are no currently planned sedimentation impoundments planned at the Brook Mine. Please see new Mine Plan and Reclamation Plan comments below that request this clarification elsewhere in the permit. (MDK)

Response MK 49 – Round 2

The statement in Section MP.5.2 was revised to state that sedimentation and wastewater reservoirs will be required for mining operations. The designs of these impoundments are provided in Addendum MP-2. Exhibit MP.5-1 has been revised to show the locations of these impoundments. The disturbance boundary has also been adjusted to encompass the impoundments. Permit-level designs have only been provided for impoundments that are planned to be needed in the first five years of operations. Any potential impoundments required after the first five years will be provided once these impoundments are within five years of ensuing operations. Due to the fact that sedimentation, wastewater, and flood control reservoirs will be required, the text changes referenced in Comments MK 106, 108,109, 110, 111, 112, 113, and 114 (New Comments) were not made. The responses to these comments reflect that.

Sedimentation reservoirs have been designed to replace the ASCMs originally shown within one half of a mile of the Tongue River and Goose Creek to satisfy the requirements set forth in Guideline 15 (as discussed in Comment MK 116 (New Comment)).

Comment MK 49 – Round 3

No comment received.

Response MK 49 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment MK 50 – Round 1

Mine Plan, Section MP.5.3 Flood Control, 24. This section discusses flood control reservoirs but it is not mentioned how many flood control reservoirs would be constructed and where their locations would be. Please provide this information to comply with LQD Coal Rules and Regulations, Chapter 2, Section 5(a)(i)(D)(IV). (MDK)

Response MK 50 – Round 1

Revised text as requested.

Comment MK 50 – Round 2

No comment received.

Response MK 50 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 51 – Round 1

Mine Plan, Section MP.5.4 Diversions, 25. This section mentions permanent diversions, but there are no apparent plans for permanent diversions. Please discuss if permanent diversions are anticipated as part of the mining operation, or if all diversions will be temporary. (MDK)

Response MK 51 – Round 1

Revised text as requested.

Comment MK 51 – Round 2

No comment received.

Response MK 51 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 52 – Round 1

Mine Plan, Section MP.5.4 Diversions, 26. Exhibit MP.5-1 shows only one diversion ditch for Hidden Water Creek in T57N, R84W, Section 9. Please discuss this particular diversion and its typical design in more detail in Section MP.5.4. (MDK)

Response MK 52 – Round 1

Revised text as requested. Add design exhibit of the Hidden Water diversion ditch.

Comment MK 52 – Round 2

No comment received.

Response MK 52 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 53 – Round 1

Mine Plan, Section MP.5.5 Culverts, 27. Please provide a brief statement that commits to a periodic culvert inspection and maintenance plan to ensure that culverts will function properly over time. (MDK)

Response MK 53 – Round 1

Revised text as requested.

Comment MK 53 – Round 2

No comment received.

Response MK 53 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 54 – Round 1

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 28. The first sentence references a sedimentation reservoir. Where is the location of this sedimentation reservoir? Are these the "sediment basins" shown in Exhibit MP.5-1? If not these sedimentation reservoirs need to be added to this Exhibit. (MDK)

Response MK 54 – Round 1

Revised text as requested.

Comment MK 54 – Round 2

No comment received.

Response MK 54 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 55 – Round 1

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 29. The first paragraph references treating and discharging pit water. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 55 – Round 1

Revised text as requested.

Comment MK 55 – Round 2

No comment received.

Response MK 55 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 56 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 30. Exhibit MP.1-1 shows surface disturbance directly over a few areas of Slater Creek and Hidden Water Creek. Please identify the source of disturbance in these areas. Direct disturbance of the channel should be avoided unless there is a plan for a diversion to route the stream around the disturbance. (MDK)

Response MK 56 – Round 1

See response to Comment MK 76, 88 and 99. Revised text as requested.

Comment MK 56 – Round 2

No comment received.

Response MK 56 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 57 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 31. The mining trenches are often discussed with reference to Exhibit MP.1-1. However, the trenches are not shown on this Exhibit. Please add the locations of the trenches to Exhibit MP.1-1. (MDK)

Response MK 57 – Round 1

Revised Exhibit MP.1-1 as requested.

Comment MK 57 – Round 2

Response not accepted. Exhibit MP.1-1 does show trenches in the east portion of the mine, but not the western portion. For example, in the first full paragraph on Page MP-42, it discusses trenches being constructed perpendicular to the flow path of the minor Tongue River drainages. On Page MP-43, several trenches are discussed: one trench constructed parallel to Slater Creek's flow in Section 18, a trench in associated with the surface mine to the west of Slater Creek, and a trench parallel to Slater Creek in Sections 11, 12, and 13. On Page MP-43, a trench is discussed along the "TRD5" channel. Please add all of these trench locations to Exhibit MP.1-1. Also, please use a different color other than grey for the trenches, as this color tends to blend with the topographic line color. (MDK)

Response MK 57 – Round 2

A hatch has been added to Exhibit MP.1-1 in the western portion of the permit boundary to more clearly show the trench locations. Another hatch has been added to Exhibit MP.1-1 to more clearly show the location of the surface mine. The hatch colors were chosen to stand out from the topographic line color. Additionally in response to Comment DS32 (New Comment), RAMACO has provided pit identification numbers on several exhibits and in Section MP.6 to make pit locations more easily understood.

Comment MK 57 – Round 3

Response accepted.

Comment MK 58 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 32. On Page MP-39, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining disturbance will be treated prior to discharge. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 58 – Round 1

Revised text as requested.

Comment MK 58 – Round 2

No comment received.

Response MK 58 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 59 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 33. Please discuss the diversion ditch for Hidden Water Creek in the first carryover paragraph on Page MP-39. (MDK)

Response MK 59 – Round 1

Revised text as requested. See Hidden Water Creek diversion Exhibit MP.5-2 for further details.

Comment MK 59 – Round 2

No comment received.

Response MK 59 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 60 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 34. On Page MP-40, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining activities will be treated prior to discharge. Please reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 60 – Round 1

Revised text as requested.

Comment MK 60 – Round 2

No comment received.

Response MK 60 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 61 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 35. On Page MP-40, there is a sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility". This statement is unclear. Are the impacts to the actual Slater Creek channel or the uplands and other tributaries in the watershed? Is it reduced ground cover and increased soil erodiblity? Please provide a more explicit description of the possible impacts. (MDK)

Response MK 61 – Round 1

See response to Comment MK 56, 76, 88 and 99. Revised text as requested.

Comment MK 61 – Round 2

Response not accepted. The text clarified that the only direct disturbance to the Slater Creek channel is where the channel will be redirected through a culvert under a proposed haul road. However, the sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility" is still unclear. This statement implies that the channel stability of Slater Creek will be affected, and that bed and banks could experience excessive erosion. Please provide more discussion on what is meant by impacts to Slater Creek channel geomorphology. (MDK)

Response MK 61 – Round 2

Text was added to the fifth paragraph of Section MP.6.1 to clarify that the geomorphology of the Slater Creek channel such as the bed and banks will not be impacted. The only impacts to ground cover and soil erodibility will be in upper portions of the Slater Creek drainage where surface disturbance activities are proposed. The text now clarifies that this is the case and that ASCMs and other sediment and runoff control measures will be used to control sediment transport to Slater Creek.

Comment MK 61 – Round 3

Response accepted.

Comment MK 62 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 36. Please provide a discussion on whether the proposed mining operation would affect surface water quality such that designated uses would be affected on the major streams on and adjacent to the proposed permit area. (MDK)

Response MK 62 – Round 1

Revised text as requested.

Comment MK 62 – Round 2

No comment received.

Response MK 62 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 63 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 37. The text describes possible reductions in peak flows and storm volumes. Please describe in the PHC if the proposed mining operation will have any effects on nearby or downstream surface water rights. (MDK)

Response MK 63 – Round 1

Revised text as requested.

Comment MK 63 – Round 2

Response not accepted. The text speaks to impacts to existing reservoirs/water rights on the permit boundary but does not provide a statement as to possible impacts to water rights off or downstream of the permit boundary. Please provide this discussion in the text. (MDK)

Response MK 63 – Round 2

The last paragraph of Section MP.6.1 previously stated:

"…the Brook Mine is expected to have an extremely small effect on surface water quality in the Tongue River and other major streams adjacent to the permit boundary of the Brook Mine. As such, no effect on the designated uses present on major streams adjacent to the permit boundary is expected."

Two sentences have been added to the last paragraph of Section MP.6.1. The first states:

"There is no anticipated impact to water rights downstream of the permit boundary either." (In reference to water quality.)

The second sentence states:

"Additionally, the minimal reduction of any surface water runoff in the upper reaches of drainages in the Brook Mine permit area will not likely have any impact on downstream water rights."

Comment MK 63 – Round 3

Response accepted.

Comment MK 64 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 38. Please add a brief statement to the PHC that if it is determined that the mining operation affects a surface water right, that water right would be replaced with a water source of similar quantity and quality as provided by W.S. § 35-11-415(b)(xii). (MDK)

Response MK 64 – Round 1

Revised text as requested.

Comment MK 64 – Round 2

No comment received.

Response MK 64 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 65 – Round 1

Mine Plan, Section MP.6.1.1 Land Erosion Stability, 39. It is unclear the intent of this section. It seems to be out of place in the mine plan, as it discusses the USLE in the context of only native and reclaimed conditions. Furthermore, no data other than the K factors are presented in Mine Plan Tables (Table MP.6.1). The Reclamation Plan also does not discuss applying the USLE, so it would seem that Section MP.6.1.1 should be removed unless a USLE analysis is completed of pre- vs during- vs postmine erosion predictions. (MDK)

Response MK 65 – Round 1

Section MP.6.1.1 has been removed.

Comment MK 65 – Round 2

No comment received.

Response MK 65 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 66 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 40. It is unclear why reservoirs will be monitored in the operational monitoring program when these features were not sampled for during baseline characterization. If the reservoirs have the potential to be affected by the mining operation they should be sampled prior to mining with this information presented in Appendix D6. (MDK)

Response MK 66 – Round 1

Revised text as requested.

Comment MK 66 – Round 2

Response not accepted. Any reservoir potentially disturbed by mining activities should have a baseline water quality sampled collected with the information presented in Appendix D6. Section MP.6.1 states that Big Horn No. 2 Reservoir, Big Horn No. 14 Reservoir, Permanent Impoundment #1 Reservoir, and Legerski #1 Reservoir will be impacted by mining activities and will be reclaimed. At a minimum, the baseline water quality should be provided for these reservoirs in Appendix D6. RAMACO may also wish to expand the list of reservoirs sampled for baseline water quality to match those listed in Table RP.8-9. (MDK)

Also, there is now a statement on Page MP-49: *All existing reservoirs, stockponds, and proposed reservoirs that will be disturbed by surface mining activities as discussed in Section MP.6.1 will be monitored for relevant discharge through grab samples to ensure that any water released from these reservoirs meets the WDEQ/LQD guidelines discussed above.* It is unclear which WDEQ/LQD guidelines are being referred to. Also, if these reservoirs are going to be discharging, a WYPDES permit would likely be required. Please clarify these items in the text (MDK).

Response MK 66 – Round 2

A commitment has been added to the first paragraph of Section MP.7.1 that states RAMACO will collect water quality data from reservoirs that could potentially be impacted by mining prior to its disturbance and this data will be provided in the Annual Reports. Table MP.7-1provides the expected monitoring locations.

Second, the statement in the third paragraph of Section MP.7.1 referring to discharge and citing aforementioned WDEQ/LQD guidelines was revised. Because these are existing reservoirs, discharge should not be the concern of RAMACO. RAMACO will monitor the reservoirs for the water quality constituents provided in Guideline 8, Appendix 7 for the time during mining upstream to ensure that mining has not impacted the reservoir.

These items should clarify that RAMACO will monitor reservoirs prior to mining operations upstream of the reservoir, and that the water quality monitoring will be to evaluate the aforementioned list as opposed to discharge. RAMACO does not have control of these reservoirs or how they are operated.

Comment MK 66 – Round 3

Response accepted.

Comment MK 67 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 41. Please add the reservoir monitoring locations listed in Table MP.7-1 to Exhibit MP.7.1. (MDK)

Response MK 67 – Round 1

Revised Exhibit MP.7.1 as requested.

Comment MK 67 – Round 2

No comment received.

Response MK 67 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 68 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 42. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

Response MK 68 – Round 1

See response MK

Comment MK 68 – Round 2

Response not accepted. The coordinates were not added to the Table. Please see response to Comment MK 35. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

Response MK 68 – Round 2

Table MP.7-1 has been updated to include the State Plane coordinates.

Comment MK 68 – Round 3

Response accepted.

Comment MK 69 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 43. Please identify what type of water quantity data will be generated from the continuous stage monitoring. For example, will mean daily flow rates and/or peak daily flow rates be estimated, as these would likely be submitted to the LQD in the Annual Report? (MDK)

Response MK 69 – Round 1

Revised text as requested.

Comment MK 69 – Round 2

No comment received.

Response MK 69 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 70 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 44. The text in the last paragraph on Page MP-45 states that water quality samples will be collected from a single station using an ISCO automatic sampler. Please identify in the text which station this is. Also, please explain the rationale for using an ISCO sampler at only one of the four stream monitoring sites. (MDK)

Response MK 70 – Round 1

Revised text as requested. The station equipped with the ISCO automatic sampler was the only station equipped with such a device due to the stations location as well as expected flows. Quarterly grab samples taken at stations upstream of mining disturbances will give an accurate representation of water quality entering the permit boundary. Since the station equipped with an automatic sampler is located near the area in which Slater Creek exits the permit boundary, an automatic sampler allows the operator see if the mining activities of the Brook Mine have an impact on the water quality of Slater Creek as the highest chance water quality is affected will occur during precipitation events. An automatic recorder was not installed at the station downstream of disturbances on Hidden Water Creek because the recorded and modeled flows for the drainage are extremely low. No observable flow had been recorded on any surface water station along Hidden Water Creek, despite precipitation events having occurring. As such, any data collected by an automatic sampler on Hidden Water Creek would occur during extreme precipitation events in which the flows through Hidden Water Creek would likely have high turbidity and be an unrealistic representation of the water quality within Hidden Water Creek.

Comment MK 70 – Round 2

No comment received.

Response MK 70 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 71 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 45. The text in the first paragraph on Page MP-46 states that data will be evaluated to determine if any surface water and groundwater interactions exist. It would seem that any interactions should have already been identified during the baseline characterization of the hydrological system on and near the proposed permit area. It does not appear that the permit application discusses surface/groundwater interactions. (MDK)

Response MK 71 – Round 1

Revised text as requested. The monitoring is a continuation of the baseline monitoring sites.

Comment MK 71 – Round 2

Response not accepted. The response states that the text was revised but the same statement remains without any additional explanation. If surface and groundwater interactions are expected to exist then these should have already been discussed in the baseline characterization of the hydrologic system. It does not appear that the

permit application discusses surface/groundwater interactions. Please provide more explanation on this in the text. (MDK)

Response MK 71 – Round 2

The third and fourth to the last sentences in the last paragraph of Section MP.7.1 were edited to state:

"Baseline monitoring has not indicated any interactions between surface water and groundwater. However, surface water data will continue to be compared to groundwater monitoring data to determine if any surface water and groundwater interactions exist that weren't observed in baseline studies."

Comment MK 71 – Round 3

Response accepted.

Comment MK 72 – Round 1

Mine Plan, Section MP.8 Water Use, 46. Please state in the text that all water from surface reservoirs or wells will be used under appropriate permits from the State Engineer's Office (SEO). (MDK)

Response MK 72 – Round 1

Revised text as requested.

Comment MK 72 – Round 2

No comment received.

Response MK 72 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 73 – Round 1

Mine Plan, Section MP.8 Water Use, 47. It is advised that the applicant discuss with the SEO-Interstate Streams Division any implications that water use may have under the Yellowstone River Compact. (MDK)

Response MK 73 – Round 1

Revised text as requested.

Comment MK 73 – Round 2

No comment received.

Response MK 73 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 74 – Round 1

Mine Plan, Addendum MP-6 Subsidence Control Plan, Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation, 48. The text states that subsidence monitoring would be discontinued if no evidence of subsidence occurred after six months after highwall mining. Please include a clarifying statement that the applicant would remediate subsidence up until bond release is approved, even if the subsidence was detected later than the six months of initial monitoring. (MDK)

Response MK 74 – Round 1

Please see revision to last paragraph of Addendum MP-6.

Comment MK 74 – Round 2

No comment received.

Response MK 74 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 106 – Round 2 (New Comment)

In Section MP.2.1.2 Change House and Equipment Service Shop, on Page MP-8, it states that wash down water will be routed to wastewater impoundment. As stated on Page MP-26, wastewater reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that wastewater reservoirs are not planned. (MDK)

Response MK 106 – Round 2 (New Comment)

The text in Section MP.2.1.2 was not revised. The text in Section MP.5.2 was changed to reflect that wastewater impoundment(s) will be required. Designs for the wastewater impoundment are provided in Addendum MP-2.

Comment MK 106 – Round 3

Response not accepted. The location of the wastewater impoundment is not shown in Exhibit MP.5- l, as the map contains labels for only sedimentation ponds and flood control reservoirs. Exhibit 12 in Addendum MP-2 shows the design for a "typical facilities reservoir". The text in Section MP 5.2 should acknowledge that the location for the wastewater impoundment is not shown on Exhibit MP.5-l and has not been determined yet, but the typical design is shown in Exhibit 12 in Addendum MP-2.

Please make this correction or explain if my understanding of this issue is not accurate. (MDK)

Response MK 106 – Round 3

Text at the end of Mine Plan Section MP.5.2 has been revised, as requested. The text states the typical facilities reservoir location has yet to be determined and a typical design is included in Exhibit 12 of Addendum MP-2.

Comment MK 107 – Round 2 (New Comment)

In Section MP.5.2.1 General Design Criteria, there is a sentence: A discussion regarding the USLE method is provided in Section MP.6.1.1. As per to the response to Comment MK 65, Section MP.6.1.1 has been removed. Please remove the sentence that references Section MP.6.1.1. (MDK)

Response MK 107 – Round 2 (New Comment)

The sentence referencing the previously deleted Section MP.6.1.1 was removed.

Comment MK 107 – Round 3

Response accepted.

Comment MK 108 – Round 2 (New Comment)

In Section MP.6.1 Surface Water, there is a sentence on Page MP-42: *Any surface runoff to come in contact with mining disturbance will be treated in the pits or retained in sedimentation control structures in the vicinity of Hidden Water Creek to meet water quality standards before being discharged from the Permit Area*. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 108 – Round 2 (New Comment)

The text in Section MP.6.1 was not revised. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 108 – Round 3

Response accepted.

Comment MK 109 – Round 2 (New Comment)

In Section MP.6.1 Surface Water, there is a sentence on Page MP-42: *As previously discussed, any runoff coming into contact with mining activities will be captured in a sedimentation impoundment or ASCM to meet water quality standards prior to discharge*

from the Permit Area. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 109 – Round 2 (New Comment)

The text in Section MP.6.1 was not revised. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 109 – Round 3

Response accepted.

Comment MK 110 – Round 2 (New Comment)

In Section MP.6.1 Surface Water, there is a sentence on Page MP-43: *Sedimentation impoundments will capture runoff that has come in contact with mining activities, and will treat the water to meet water quality standards before discharge.* As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 110 – Round 2 (New Comment)

The text in Section MP.6.1 was not revised. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 110 – Round 3

Response accepted.

Comment MK 111 – Round 2 (New Comment)

In Section MP.6.1 Surface Water, there is a sentence on Page MP-44: *Any runoff that does enter disturbed areas will be captured in a sedimentation pond or treated in the trenches to meet water quality requirements before being discharged from the Permit Area.* As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 111 – Round 2 (New Comment)

The text in Section MP.6.1 was not revised. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 111 – Round 3

Response accepted.

Comment MK 112 – Round 2 (New Comment)

In Section MP.12.5 Mine Facilities, the first bullet is for a Sedimentation Pond. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 112 – Round 2 (New Comment)

The bullet item in Section MP.12.5 was not deleted. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 112 – Round 3

Response accepted.

Comment MK 113 – Round 2 (New Comment)

In Section MP.12.5 Mine Facilities, the second bullet is for a Wastewater Reservoir. As stated on Page MP-26, wastewater reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that wastewater reservoirs are not planned. (MDK)

Response MK 113 – Round 2 (New Comment)

The bullet item in Section MP.12.5 was not deleted. The text in Section MP.5.2 was changed to reflect that wastewater reservoirs will be required for mining operations. The design for the wastewater impoundment is provided in Addendum MP-2.

Comment MK 113 – Round 3

Response accepted.

Comment MK 114 – Round 2 (New Comment)

In Section MP.12.5 Mine Facilities, the third bullet is for a Flood Control Reservoir. As stated on Page MP-29, flood control reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that flood control reservoirs are not planned. (MDK)

Response MK 114 – Round 2 (New Comment)

The text in Section MP.5.3 in the second paragraph was revised to reflect that flood control reservoirs will be required for mining operations within the first five years. The designs of these flood control reservoirs are provided in Addendum MP-2 and the

locations in relation to the permit area are shown on Exhibit MP.5-1. Therefore, the text in Section MP.12.5 was not revised to remove "Flood Control Reservoir" from the list.

Comment MK 114 – Round 3

Response accepted.

Comment MK 115 – Round 2 (New Comment)

Mine Plan Addendum MP-1 commits to getting LQD approval and doing further sediment yield analysis for ASCMs that drain larger than 30 acres, as per LQD Guideline No. 15. It isn't clear from the Hydrologic Control Plan in Exhibit MP 5-1 if any of the currently proposed ASCMs drain more than 30 acres. Please indicate if any of the ASCMs shown in Exhibit MP 5-1 drain more than 30 acres. (MDK)

Response MK 115 – Round 2 (New Comment)

Exhibit MP.5-1 now shows the drainage areas for any ASCMs that drain more than 30 acres. Any ASCMs with drainage areas of more than 30 acres have designs provided in Addendum MP-2.

Comment MK 115 – Round 3

Response accepted.

Comment MK 116 – Round 2 (New Comment)

LQD Guideline No. 15 states that ASCMs should not be used for disturbed or reclaimed areas that are within one-half mile (channel distance) of Class 1 or Class 2 streams. Since the Tongue River and Goose Creek are Class 2 streams, please provide an analysis of the distance of the currently proposed ASCMs on Exhibit MP 5-1 to the Tongue River and Goose Creek. In accordance with LQD Guideline No. 15, more traditional sediment control methods (i.e., sedimentation impoundments) may be needed for disturbed areas that are close to the Tongue River and Goose Creek. (MDK)

Response MK 116 – Round 2 (New Comment)

Exhibit MP.5-1 now shows a half mile buffer from the Tongue River and Goose Creek. In those locations where ASCMs had been proposed within a half mile of either the Tongue River or Goose Creek, more robust methods of sediment control have been implemented (primarily sediment impoundments and collector ditches). Because several locations that require such sediment control measures are within the first five years of operations, sediment impoundments have been designed and these designs are provided in Addendum MP-2. The locations of the sediment impoundments and collector ditches in relation to the permit area are shown on Exhibit MP.5-1.

Comment MK 116 – Round 3

Response not accepted. Thank you for providing the Class 1 and Class 2 Stream1/2 mile buffer on Exhibit MP 5-1 and for showing other forms of sediment control besides ASCMs in the buffer. However, the text should in this section should also state that the mine trenches will also serve as sediment control. This is important to demonstrate since there are some areas, for example in Section 18 near TR-6 and in Section 14 near TR-9A and TR-12 that are within the buffer to the Tongue River but sedimentation ponds will not be used. (MDK)

Response MK 116 – Round 3

The first paragraph of Section MP.5.1 has been revised to include discussion of mine trenches as a form of sediment control.

Comment MK 117 – Round 2 (New Comment)

LQD Guideline No. 15 provides monitoring guidance for ASCMs based on the drainage area upstream of the ASCM. For large receiving streams (drainage area greater than 1.0 square mile), monitoring should include repeated surveys of channel cross-sections and/or upstream and downstream sediment yield stations. Please provide a commitment to conduct this monitoring to evaluate the performance of the proposed ASCMs that drain to large receiving streams. (MDK)

Response MK 117 – Round 2 (New Comment)

A commitment has been added to the last paragraph of Section MP.5.1 that RAMACO will either monitor the stream channel cross sections or will have upstream and downstream sediment yield monitoring stations to ensure the ASCMs are functioning properly in areas that drain to receiving streams with a drainage area of greater than 1.0 square mile.

Comment MK 117 – Round 3

Response accepted.

Comment MK 123– Round 3 (New Comment)

MP.1.3 Acreage to Be Affected Annually. There is a sentence in the second paragraph of this section that is confusing and needs rewritten to improve clarity. The difference between disturbance boundary and affected area boundary would likely be confusing to the public and therefore a clear distinction should be made. The sentence states: The disturbance boundary includes all lands that will be physically disturbed during mining lands that are exclusive of the disturbance boundary but inclusive of the affected area boundary have the potential to be disturbed by mining. It is suggested that this be broken into two sentences: The disturbance boundary includes all lands that will be physically and directly disturbed during mining. The affected area

boundary includes all lands within the disturbance boundary plus additional lands that have the potential to be disturbed by mining.

Response MK 123 – Round 3 (New Comment)

The sentences in the second paragraph of Section MP.1.3 regarding the disturbance and affected area boundaries have been revised for clarity, as requested.

Comment MK 124– Round 3 (New Comment)

MP.8 Water Use. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-1, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response MK 124 – Round 3 (New Comment)

Surface water rights will be obtained through the State Engineers Office and in accordance with the Yellowstone Compact. No changes to the Mine Plan have been made in response to this comment.

Comment MK 125– Round 3 (New Comment)

MP.12.4 Buffer Zones. Assuming Slater Creek is an intermittent stream (Comment MK 29), LQD Coal Rules and Regulations, Chapter 4, Section 2 (r)(ii)(B) states that a buffer zone shall be designated, marked in the field, and on a mine plan map. From Chapter 4, Section 2 (r)(ii)(A), this buffer zone is to be 100 feet. Please designate the buffer zone on Exhibit MP-5.1 and provide a commitment to marking the buffer zone at select locations in the field prior to commencing mining-related disturbance. (MDK)

Response MK 125 – Round 3 (New Comment)

A buffer zone boundary of Slater Creek has been added to Exhibit MP.5-1. A commitment to provide a buffer zone marked in the field prior to commencing mining related disturbance has been placed in the fifth paragraph of Section MP.6.1.

Comment MK 126– Round 3 (New Comment)

MP.25 Alluvial Valley Floors. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this round. Please include a statement in the text of Section MP .25 that there is some minor disturbance proposed within the AVF extent. Please also discuss in the text of

MP.25 whether this disturbance would affect the essential hydrological functions of the AVF. (MDK)

Response MK 126 – Round 3 (New Comment)

Minor disturbance is planned within the Big Horn Mine AVF extent in Section 21of Township 57 North, Range 84 West. The disturbance would include placement of an overburden pile (OB-1) and a sediment pond (SP-1). The disturbance should not affect the essential hydrologic functions of the AVF on the Tongue River as the disturbed area is minimal in size and should not preclude the conveyance of flow. Discussion of the planned AVF disturbance has been added to the second paragraph of Section MP.25.

Comment MuK 32 – Round 1

Mine Plan, 32. Please provide an electronic copy of the groundwater model referenced in Addendum MP-3. In addition, please provide the GIS projection coordinate of the model files that will enable the LQD to plot the model results in GIS for the purposes of producing the CHIA (Cumulative Hydrologic Impact Assessment). The LQD review of the model files might potentially generate additional comments, clarifications or questions. (MK)

Response MuK 32 – Round 1

An electronic copy of the groundwater model will be provided under separate cover. The elements in the model are based on the Wyoming East Central NAD 83 state plane coordinate system. To convert from model Grid to the state plane coordinates the X offset is 1367387.512 and the Y offset is 1915004.382. There is no rotation from the model grid to the state plane coordinate system.

Comment MuK 32 – Round 2

Response conditionally accepted. Because of a version compatibility issue between the software used by the LQD and the mine, the LQD was not able to review the model files. The LQD has contacted Office of Surface Mining (OSM) to explore the options (if any) to update the Groundwater Vistas software to the latest version. OSM is looking into this issue and has not responded during the completion of the review. The LQD would also welcome any suggestions from the mine to resolve this issue. (MK)

Response MuK 32 – Round 2

RAMACO suggests that WDEQ/LQD obtain a "Student License" for Groundwater Vistas. A student license will allow WDEQ/LQD to view the model but not to make any changes to the model. The Brook Mine model cannot be saved to an older version of Groundwater Vistas without causing significant issues in the functionality of the model. The newer versions of Groundwater Vistas contain features vital to the functionality of the model that are not available in older versions of Groundwater Vistas.

Comment MuK 32 – Round 3

Response not accepted. The LQD was able to obtain a newer version of Groundwater Vistas from the OSM. The model files provided in the initial submittal were attempted to run following the written instructions that came along with the model fi les. The steady state model ran and the results for mass balance were similar to the results provided in the application. However, the transient model results do not align with the results presented in the application. Please provide additional assistance and clarification to help the LQD replicate the model results. Depending on the results from this verification run, additional comments may be generated. In addition, please review comment# 74 on the revised model files.

Response MuK 32 – Round 3

During follow up discussions between WWC and Muthu Kuchanur it was discovered that from the time that the original model was developed and the time that the model files were reviewed at LQD, Groundwater Vistas had been updated. The model files provided to LQD were developed in Groundwater Vistas Version 6.43 Build 4. However LQD was using a later version of Groundwater Vistas (Version 6.78 Build 37. When the model files were run on the newer version of Groundwater Vistas they returned erroneous results. WWC downloaded the latest version of Groundwater Vistas (Version 6.80 Build1) available on December 1, 2015 and reconfigured the model to run on the latest version of Groundwater Vistas.

When the model files were configured to run on the later version of Groundwater Vistas, there were a few minor changes in the model results. While most of the differences in the model results were very minor, in order to ensure that the results reported in Addendum MP-3 matched the latest model simulations several pages in Addendum MP-3 were updated with the latest model results. Following are the pages in Addendum MP-3 that have been updated:

Executive summary, Page 4-the modeled drawdown to private wells was updated.

Executive summary, Page 5-the modeled drawdown to private wells was updated.

Section 3.1, Page 30-The version and build number used for the latest version of the model simulations was updated.

Table 4.7-1, Page 49, -The calibration Results were updated.

Figure 4.7-4, Page 54 -Model residuals on the figure were updated.

Table 4.8-1, Page 55-Model sensitivity results were updated.

Table 4.8-2 and Table 4.8-3 Page 56-Model sensitivity results were updated.

Table 4.8-4, Page 57- Model sensitivity results were updated.

Section 4.9, Page 58- To accommodate a more efficient mine plan, in December 2015, RAMACO shifted the slot location between mine blocks 1 and 2 to the north approximately 630 feet. Since the footprint of the mine blocks are still generally similar, this small change in the location of the slot is not expected to significantly alter the groundwater model predictions. As a result, the groundwater model was not adjusted to specifically address this minor change to the mine plan. Additional text was added to this page to address the changes in the mine plan.

Table 4.9-1, Page 69 Maximum modeled drawdowns for adjacent wells were updated.

Section 4.9, Page 72 (Includes Table 4.9-2)-text and table describing pit inflows were updated.

Table 4.10-1, Page 77-Table was updated to include text denoting stress period and time step when values were measured and total inflow value for 5 years into mining were updated.

The latest model files configured to run on Groundwater Vistas Version 6.80, Build 1 are provided on a DVD with these comment responses.

Comment MuK 33 – Round 1

Mine Plan, MP.1.1 Type of Mine, 33. Page MP-1 states, "Below the Tongue River Member is the Lebo shale member of the Fort Union Formation which contains the Masters Seam (Cardno MM&A, October 2013)." This statement is not consistent with Table D5.3-1, Page D5-T1 and other descriptions in Appendix D5. Table D5.3-1 indicates Masters Coal seam is in the Tongue River Member. Please clarify and make appropriate changes throughout the submittal (Example: MP 4.4). (MK)

Response MuK 33 – Round 1

Revised text as requested.

Comment MuK 33 – Round 2

No comment received.

Response MuK 33 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 34 – Round 1

Mine Plan, MP.1.1 Type of Mine, 34. Major coal seams on the Brook Mine include: Dietz (1,2,3), Monarch, Upper Carney, Lower Carney and Masters.". Dietz (1,2,3) coal seam is not included in the description presented in Section D5.3.3.3, Appendix D5. Please clarify: (i) the seams that will be mined by the Brook Mine and (ii) include the description of all the coals seams as appropriate in Appendix D5 and Appendix D6. (MK)

Response MuK 34 – Round 1

Please refer to Mine Plan Section MP.4.4.1 for targeted coal seams at the Brook Mine.

Comment MuK 34 – Round 2

No comment received.

Response MuK 34 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 35 – Round 1

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, Consider using the groundwater model referenced in Appendix D-3 to provide a description for a range of estimates on anticipated dewatering rates/volumes and groundwater inflows to the mine pit. (MK)

Response MuK 35 – Round 1

The text in Section MP.5.8 is to indicate that water entering the pit from either groundwater or surface water will be controlled using sumps and treated prior to discharge.

Comment MuK 35 – Round 2

Response not accepted. Please provide a range of estimates of the expected groundwater inflows to the pit. The intent of this comment is to understand the volume/rate of water that will be dewatered to facilitate mine operations. In addition, please clarify if the groundwater model provides an estimate of this inflow to the pit. (MK)

Response MuK 35 – Round 2

Yes, the amount of water discharging from the drains to simulate mining can be used to estimate how much water would enter into the mine pits during the mining scenarios. The model predicted pit inflow rates are estimated to range between 0.3 gpm and 75 gpm depending on the location of the mine pits. Model predicted pit inflow rates have been added to Addendum MP-3 Section 4.9 (Table 4.9-2). Also, text describing the range of flows has been added to Section MP.5.8.

Comment MuK 35 – Round 3

Response accepted.

Comment MuK 36 – Round 1

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, 36. Please clarify the anticipated effects of the faults on the dewatering plan or groundwater impacts during mining. (MK)

Response MuK 36 – Round 1

Since the water will be collected in a sump, treated, and then discharged, the faults should have no effect.

Comment MuK 36 – Round 2

Response not accepted. It is acknowledged that the water will be collected in a sump. The intent of the comment is to get an understanding on the effects of faults on the inflows to the pit. For example, are the pit inflow rates sensitive to the location and permeability of the faults within the permit boundary? If yes, please provide a range of estimates to account for this sensitivity. (MK)

Response MuK 36 – Round 2

The faults do influence the inflow to the pits. As shown on MP-3 Figures 4.9-12, 4.9-13, and 4.9-14 the faults generally cause a shadow effect where the coals downstream of the faults dry out because the faults prevent efficient recharge of the coal aquifer downstream of the fault. An additional table added to Addendum MP-3 (Table 4.9-2) allows the influence of the faults on the pit inflows to be further evaluated. As shown on Table 4.9-2 the predicted pit inflow rates decline significantly between 2018 and 2019. Between 2018 and 2019 the mining moved closer to the fault located in the northeast side of the permit. The decline in pit inflow is partially due to the fact that the coals immediately downgradient of the fault are drier.

Comment MuK 36 – Round 3

Response accepted.

Comment MuK 37 – Round 1

Mine Plan, MP.5.9 Dewatering Wells, 37. Please provide a brief discussion on the anticipated quality of groundwater removed at various stages of mining. (MK)

Response MuK 37 – Round 1

Revised text as requested.

Comment MuK 37 – Round 2

Response not accepted. In addition to the reference to Appendix D6, please provide a description of any expected variability or trends in water quality of the groundwater removed as different coal seams are mined. Are there any expected groundwater constituents of concern based on Appendix D6? (MK)

Response MuK 37 – Round 2

The third paragraph of Section MP.5.9 now includes a short discussion summarizing information from Appendix D6. The discussion states some of reasons why water

quality could vary during the progression of mining operations. However, the discussion also states that even with the variability, there are no expected groundwater constituents of concern that could cause problems during dewatering and surface containment. The following table is a summary of the information already provided in Appendix D6:

Constituent of Concern	Units	Acute Standard[1]	CRN	MST	CRN-MST
Priority Pollutants					
Arsenic, dissolved	mg/L	0.34	<0.005	<0.005	<0.005 - 0.007
Cadmium, dissolved	mg/L	0.002	<0.001	<0.001	<0.001 - 0.001
Copper, dissolved	mg/L	0.0134	<0.01 - 0.02	<0.01	<0.01
Lead, dissolved	mg/L	0.0646			<0.02
Mercury, dissolved	mg/L	0.0014	<0.001	<0.001	<0.001
Nickel, dissolved	mg/L	0.4682	<0.01	<0.01	<0.01
Selenium, dissolved	mg/L	0.02	<0.005 - 0.005	<0.005	<0.005 - 0.005
Zinc, dissolved	mg/L	0.1172	<0.01 - 0.01	<0.01 - 0.02	<0.01
Non-Priority Pollutants					
Ammonia	mg/L	varies[2]	<0.1 - 7.6	2 - 10.6	1 - 2.3
Chloride	mg/L	860	7 - 27	7 - 30	11 - 24
Fluoride	mg/L	2 [3]	0.5 - 1.9	0.5 - 1.5	1.7 - 2
Laboratory pH	s.u.	6.5-9.0	7.6 - 8.3	7.6 - 8.4	8.3 - 8.4
Nitrate/Nitrite	mg/L	10 [3]	<0.1 - 7.9	<0.1 - 8	<0.1 - 1.2
Barium, dissolved	mg/L	2 [3]	<0.1	<0.1	<0.1
Iron, dissolved	mg/L	0.3 [3]	<0.05 - 0.22	<0.05 - 0.68	<0.05 - 0.21

[1] WDEQ-WQD Rules and Regulations Chapter 1, Appendix B, Aquatic Life Acute Value
[2] WDEQ-WQD Rules and Regulations Chapter 1, Appendix C, Ammonia Toxicity is pH and Temperature Dependent
[3] WDEQ-WQD Rules and Regulations Chapter 1, Appendix B, Human Health Consumption of Fish and Drinking Water

As can be seen in this summary table, most constituents in the Carney and Masters coal seams fall below the acute standard. This table has not been included in the Mine Plan because this is baseline data that does not belong in the Mine Plan. This table has also not been added to Appendix D6 because the groundwater quality constituent concentrations are already summarized in Appendix D6. RAMACO has

committed in the Mine Plan to monitoring groundwater quality during the course of operations in order to ensure that there are no constituents of concern that could cause issues while dewatering the mine pits in potential surface containment.

Comment MuK 37 – Round 3

Response accepted.

Comment MuK 38 – Round 1

Mine Plan, MP.5.9 Dewatering Wells, 38. If groundwater is discharged into a stream channel, anticipated discharge flow rate, water quality, and estimated seasonal discharge of the groundwater should be tabulated. The availability and suitability of this water for downstream water users should also be evaluated. Please clarify if this is an expected mechanism to discharge pumped groundwater. (MK)

Response MuK 38 – Round 1

Revised text as requested.

Comment MuK 38 – Round 2

No comment received.

Response MuK 38 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 39 – Round 1

Mine Plan, MP.5.8 Groundwater Rights, Please include a description on any expected degradation of groundwater quality caused by the mining operation (including lateral flow through spoils) in the adjudicated wells. (MK)

Response MuK 39 – Round 1

Revised text as requested.

Comment MuK 39 – Round 2

No comment received.

Response MuK 39 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 40 – Round 1

Mine Plan, MP.6.2.Groundwater, 40. Please provide a brief discussion on any hydrologic effects caused by anticipated changes in recharge to the aquifers during mining. (MK)

Response MuK 40 – Round 1

Revised text as requested.

Comment MuK 40 – Round 2

Response not accepted. Not able to locate the revision made. Typically, the revisions from other operators are highlighted with bolded text or a different color to enable the reviewer to efficiently review the changes made. Without that tracking mechanism, it is difficult to review the exact revisions. Please consider using a distinct tracking mechanism in the future submittals. (MK)

Response MuK 40 – Round 2

RAMACO does not anticipate significant changes to recharge rates due to disturbance at the Brook Mine. Two sentences have been added to the end of Section MP.6.2.1 that state that RAMACO doesn't expect significant fluctuations in recharge rates, but commits to monitoring groundwater levels according to Section MP.7 and will report any significant fluctuations in groundwater levels that could be attributed to altered recharge rates.

Comment MuK 40 – Round 3

Response accepted.

Comment MuK 41 – Round 1

Mine Plan, MP.6.2.Groundwater, 41. Please provide an assessment of any subsidence effects (Addendum MP-6) on the hydrologic system during operations. (MK)

Response MuK 41 – Round 1

Revised text as requested.

Comment MuK 41 – Round 2

No comment received.

Response MuK 41 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 42 – Round 1

Mine Plan, MP.6.2.Groundwater, 42. Please discuss if there are any expected impacts on groundwater quality caused by subsidence. (MK)

Response MuK 42 – Round 1

Revised text as requested.

Comment MuK 42 – Round 2

No comment received.

Response MuK 42 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 43 – Round 1

Mine Plan, MP.6.3.2 Plan to Mitigate the Impacts on Groundwater, 43. If the quality or quantity of adjudicated water supplies are affected, then an alternative source should be identified as part of the mitigation plan. Please provide a statement to meet this statutory requirement (W.S. § 35-11-415(b)(xii)). (MK)

Response MuK 43 – Round 1

Revised text as requested.

Comment MuK 43 – Round 2

No comment received.

Response MuK 43 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 44 – Round 1

Mine Plan, MP.7.2 Groundwater Monitoring, 44. Please clarify the lack of any shallow monitor wells near Hidden Water Creek, Goose Creek and Tongue River alluvium and if this will be an impediment to completely characterize the groundwater impacts during mining. (MK)

Response MuK 44 – Round 1

Hidden Water Creek has no alluvium therefore, no shallow well can be installed. Goose Creek in the area of the permit is through a reclaimed mine area (pre-law) therefore there is not alluvium. As discussed throughout we will not impact the Tongue River Alluvium. RAMACO will add wells in the Tongue River Alluvium.

Comment MuK 44 – Round 2

Response not accepted. Please provide a more detailed plan for installing the proposed alluvial monitoring well(s). (MK)

Response MuK 44 – Round 2

See comments MK-21,22 (Round 2) responses. Discussion of the potential AVF impacts and proposed alluvial monitoring plan is presented in Mine Plan Section MP.25.

Comment MuK 44 – Round 3

Response accepted.

Comment MuK 45 – Round 1

Mine Plan, MP.7.2 Groundwater Monitoring, 45. Please clarify the possibility of any of the monitor wells shown in Exhibit MP.7-7 being discontinued due to any constraints in the proposed-mine plan (example: mined through). (MK)

Response MuK 45 – Round 1

Revised text as requested.

Comment MuK 45 – Round 2

No comment received.

Response MuK 45 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 46 – Round 1

Mine Plan, MP.8 Water use, 46. Page MP-47 states, "Industrial water will be obtained from groundwater wells or from water collected in sediment and flood control reservoirs." Please clarify if the groundwater wells mentioned in this statement are wells that will be exclusively used as industrial supply wells or if they are same as dewatering wells. (MK)

Response MuK 46 – Round 1

Revised text as requested.

Comment MuK 46 – Round 2

Response not accepted. Please provide additional description on the source aquifer for the proposed industrial supply wells. (MK)

Response MuK 46 – Round 2

Discussion regarding wells as a water source was removed from Section MP.8. Due to the coal seams being mostly dry and the only reliable aquifers being very deep, RAMACO will rely on surface water rights and water collected in the sediment and

flood control reservoirs and other sources for supplying the quantities of water needed for industrial purposes. Refer to Table MP.8-1 for a summary of water quantity obtained from each source.

Comment MuK 46 – Round 3

Response accepted.

Comment MuK 47 – Round 1

Mine Plan, MP.8 Water use, 47. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a discussion comparing the reported water use by other mines of similar size in the Powder River Basin.

Response MuK 47 – Round 1

No record of reported water use was discussed in the annual reports submitted to WDEQ for several different mines within the Powder River Basin. As such, a comparison was unable to be made.

Comment MuK 47 – Round 2

Response not accepted. The SEO requires a submittal of the water use by the other mines. In addition, the coal review reports by the BLM also provide a summary of water use. Example: AECOM, Inc., 2014, Update of the Task 1B Report for the Powder River Basin Coal Review – Current Water Resources Conditions, prepared for Bureau of Land Management High Plans District Office and Wyoming State Office, http://www.blm.gov/pgdata/etc/medialib/blm/wy/programs/energy/coal/prb/coalreview/phase2/Task1B.Par.91805.File.dat/Task1B.pdf.

Response MuK 47 – Round 2

As discussed in the meeting between WDEQ and WWC on September 1, 2015, the AECOM report has been added as a reference to the Mine Plan. Water usage for the Brook Mine has been reevaluated and presented in Table MP.8-1. The fourth paragraph of Section MP.8 summarizes the expected water usage by the Brook Mine per year. This paragraph states that the approximate annual water usage at the Brook Mine will be 368 acre-feet which is on the lower end of water usage ranges provided in the report (300 to 920 acre-feet).

Comment MuK 47 – Round 3

Response accepted.

Comment MuK 48 – Round 1

Mine Plan, MP.8 Water use, 48. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a comparison of

this estimated total water use against the various estimated water sources available during mining (Example: from dewatering wells). It will be very helpful to provide a discussion on contingency measures during extreme wet/dry years or if the proposed mine plan does not require extensive dewatering. (MK)

Response MuK 48 – Round 1

RAMACO is currently working to solidify the necessary water right for this water. The sources and associated amounts are in discussions and therefore not presented at this time.

Comment MuK 48 – Round 2

Response not accepted. The information will be reviewed as soon as it is made available to the LQD. (MK)

Response MuK 48 – Round 2

Table MP.8-1 has been added to the Mine Plan to outline the specific water uses with estimated quantities projected at the Brook Mine. Table MP.8-1 also shows the expected volume of water from each source. The fourth paragraph of Section MP.8 has been revised to state that the Brook Mine will use approximately 120 million gallons per year with an expected variability of plus or minus 20 percent. A statement was added to the fourth paragraph of Section MP.8 that enough water is available from the surface water rights that any variations in the quantities from other sources can be covered by the surface water rights.

Comment MuK 48 – Round 3

Response accepted.

Comment MuK 49 – Round 1

Mine Plan, MP.8 Water use, 49. Please clarify if there is any expected variability in this projected water use (example: is it closely related to the mine plan). (MK)

Response MuK 49 – Round 1

Revised text as requested.

Comment MuK 49 – Round 2

Response not accepted. The text indicates that the total water use will be approximately 400 million gallons per year. Please provide at least a range of expected variability in this projected annual water use. (MK)

Response MuK 49 – Round 2

The water usage at the Brook Mine has been reevaluated. Table MP.8-1 has been added to the Mine Plan which summarizes the expected quantities of water usage per day by specific use. This table shows that the Brook Mine is expected to use approximately 328,200 gallons per day. The fourth paragraph of Section MP.8 states that this equates to approximately 120 million gallons per year (significantly less than originally reported). The text in the fourth paragraph of Section MP.8 also states that the water usage has an expected variability of plus or minus 20 percent.

Comment MuK 49 – Round 3

Response accepted.

Comment MuK 50 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 50. Page Addendum MP-3-19 states, "Since, most of the wells within the modeled domain are stock wells with intermittent pumping and completed in geologic strata below the Masters Coals, they are relatively inconsequential to the groundwater system modeled in this report." Please provide a Figure (or reference) to show these wells, their depths and discuss on why they are hydrogeologically isolated from the effects of the proposed mine. (MK)

Response MuK 50 – Round 1

All the groundwater rights are tabulated within Appendix B of the adjudication volume and Exhibits 5 and 8 in the adjudication volume show the locations of each respective groundwater right. Please note that adjudication Exhibits 5 and 8 include monitor wells in addition to stock and domestic wells so all the wells shown on the exhibits are not necessarily wells that are being used as water supply wells. In fact, almost all the completed water wells shown on Exhibit 5 of the adjudication volume within the Brook Mine permit area are actually monitor wells. The Cross Sections presented in Exhibit 2 of Addendum D5-3 show the depth of the coal seams at various locations within the Brook Mine Permit. For comparison, the depths of each well are listed in the tabulation in Appendix B of the adjudication volume.

The statement on Page MP-3-19 "they (the wells) are relatively inconsequential to the groundwater system modeled in this report" means that the wells are not believed to be significant stressors to the groundwater system because of their relatively low pumpage rates. This statement should not be interpreted to mean that all of the stock and domestic wells in the area are hydrologically isolated from the coals proposed for mining within the Brook Mine Permit area. In fact, Section 4.9 of Addendum MP-3 specifically describes 26 wells that, based on their depths and locations, are likely completed within the coals. The expected impacts to these wells were assessed as part of the modeling exercise. Based on a comparison between the reported depths in the water rights tabulation in Appendix B of the adjudication volume and the geologic cross sections in Addendum D5-3, the other stock and domestic wells in the area were

determined to be completed either in the Tongue River alluvium, or deeper strata below the Carney coal and do not have a direct hydrologic connection to the coals proposed for mining in the Brook Mine and were not specifically evaluated in the groundwater model.

Along the eastern edge of the model domain there are a large number of CBM wells and, based on available data presented in the water rights tabulation in Appendix B of the Adjudication volume, these wells are likely pumping water from the Carney and Masters coal seams. The impacts from the CBM wells are described in detail within later sections of the report. However, the text on page MP-3-19 does not speak to the CBM wells. Minor changes to the text on page Addendum MP-3-19 and additional explanatory text have been added to this page to provide further clarification.

Comment MuK 50 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 50 – Round 2

Section 2.2 of Addendum MP-3 had previously been updated to incorporate this comment response. Additional explanatory text has also been added to Addendum MP-3 Section 2.3 to further incorporate the context of this response into the Permit Application.

Comment MuK 50 – Round 3

Response accepted.

Comment MuK 51 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 51. Page Addendum MP-3-20 states, "The faults are significant in lateral extent and form natural no flow boundaries". Please provide a discussion (or refer to a discussion) on how these faults were determined to be no flow boundaries. (MK)

Response MuK 51 – Round 1

Faulting within the permit area was mapped by B.E. Barnum on the USGS Monarch Quadrangle. As noted in Section D5.3.2, Barnum indicates fault displacements on the order of 50 feet within the mine area. Lithologic logs provided in Addendum D-5-3 demonstrate that the dominating lithology in the column is claystone and coal thicknesses are less than 20 feet. This offset geology from faulting results in a claystone hanging or footwall adjacent the coal aquifer and therefore discontinuity of the aquifer and an assumed hydrologic flow boundary.

Comment MuK 51 – Round 2

Response not accepted. It is appreciated and acknowledged the note of lithologic logs. In addition, please clarify or substantiate if there is any hydrologic evidence to support the interpretation that the faults are no flow boundaries (Example: water levels, water quality or other hydrologic evidence). This will increase the validity of the no-flow assumption. (MK)

Response MuK 51 – Round 2

In addition to the lithological evidence discussed in the previous response that supports treatment of the faults as no flow barriers, comparisons of water levels in coal monitor wells on either side of the fault also demonstrate that the faults serve as no flow barriers. Exhibits D6.2-2 and D6.2-3 in Addendum D6 illustrate the potentiometric surface in Masters and Carney coal seams, respectively. As shown on Exhibits D6.2-2 and D6.2-3, within the northeastern portion of the Brook Mine permit area there are two monitor well clusters that straddle both sides of a fault (578408 and 578409). In the case of the Masters coal, the measured water level in the monitor well on the upper side of the fault (578408-MST) is 173 feet higher than the water level measured in the monitor well completed on the downblock side of the fault (578409-MST). Similarly, the measured water level difference across the fault in the Carney monitor wells is approximately 180 feet. The change in potentiometric head between the monitor wells on both sides of the fault is significantly higher than would be expected due to the natural gradient in this area. Therefore, the variation in the measured potentiometric head across the fault demonstrates that it does serve as a hydraulic barrier. Additional text has been added to Addendum MP-3 Section 2.4.1 to more fully describe the effects that the faults have on the conceptual flow model.

Supplemental analysis of water quality on opposite sides of the faults has been conducted to note any difference in water quality that would indicate that the faults serve as no-flow barriers. This analysis and discussion has been added to Addendum MP-3 in Section 2.4.1.

Comment MuK 51 – Round 3

Response accepted.

Comment MuK 52 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 52. Please clarify the reason for not estimating vertical hydraulic conductivity of the interburden using an aquifer test. (MK)

Response MuK 52 – Round 1

Response to this comment is partially clarified in responses to MK's Comments 18 and 19 above. During the aquifer test conducted at the 578409 well cluster no response was observed across the interburden, therefore, the vertical hydraulic conductivity of

the interburden was too low to measure in the aquifer test. Furthermore, the static water levels in the Masters and Carney coal seams are different which demonstrates that the hydraulic conductivity of the interburden is very low. Therefore, literature values were utilized and adjusted within reasonable bounds to improve model calibration.

Comment MuK 52 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 52 – Round 2

The context of this response was incorporated into Addendum D6-8 "Pumping Test Report." The context was added into Section D6-8.4 "Determination of Aquifer Parameters."

Comment MuK 52 – Round 3

Response accepted.

Comment MuK 53 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 53. Page Addendum MP-3-25 states, "With no unnatural stresses on the system …" Please provide a discussion of the CBM impacts on the water levels. It appears that the hydrographs presented in Appendix D6 do not show the impacts of CBM. (MK)

Response MuK 53 – Round 1

There are multiple CBM production wells located along the eastern side of the groundwater domain. In order for the CBM producers to be able to produce gas it is necessary to significantly lower the water levels in the coal to release the gas in the coal fractures. CBM production began in this area around 1999. Therefore, it was conservatively assumed that CBM production has already resulted in lowering the water levels in the coal aquifers to the top of the coal aquifer along the eastern edge of the model domain and the general head boundaries were set accordingly to simulate this effect. Even though water level data in the coal aquifer prior to CBM production is limited because of the lack of monitor well data, prior to CBM production, the potentiometric head in the coal was estimated to be significantly higher than the top of coal.

The hydrographs presented in Appendix D6-9 do not show the impacts of CBM because they show water level changes over a one year period roughly 13 years after CBM production began in the area, and if the wells were going to be impacted by CBM, it is likely that they have already been impacted. Please note that the model assumed that CBM production would continue into the future resulting in the water levels in the coal being maintained at unnaturally low levels. Therefore, the model has

conservatively estimated the combined impacts from both CBM and the proposed coal mining activities. Currently, a large majority of the CBM wells are being plugged and abandoned which may result in higher than predicted water level recovery rates in the coal aquifer.

Text edits were made to page MP-3-25 to help clarify the discussion.

Comment MuK 53 – Round 2

No comment received.

Response MuK 53 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 54 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 54. There are two sub-sections for recharge, Section 2.5.3 and Section 2.6.1. Please clarify/consolidate. (MK)

Response MuK 54 – Round 1

The two subsections have been combined into one subsection under Section 2.6.1.

Comment MuK 54 – Round 2

No comment received.

Response MuK 54 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 55 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 55. Page Addendum MP-3-26 states, "… drain cells were placed in the model to simulate seeps from the outcrops." Please provide a discussion on the evidence for seeps (or reference) observed during field surveys. Were there any field data collected on the location and flow rates of these seeps? (MK)

Response MuK 55 – Round 1

Evidence of seeps from outcrops can be seen in Color Infrared Imagery (CIR), which is included in the permit as Exhibit D11.1-1. The areas of seepage are manifested on the CIR imagery as areas with more vegetation. Evapotranspiration from the vegetation growing along the seep removes all the water before it emanates from the formation into the drainage. Therefore, no measurements of the seepage rate at the outcrops were possible or are available. Additional discussion explaining the need for drain cells within the model is provided in Section D6.2.2. Also, text was added to Section D6.2.2 to clarify that no field flow measurements were available.

Comment MuK 55 – Round 2

Response conditionally accepted. Please include the discussion on CIR into the permit application (MK)

Response MuK 55 – Round 2

Additional text describing the seeps was added to Addendum MP-3 Section 2.6 to incorporate the context of this response.

Comment MuK 55 – Round 3

Response accepted.

Comment MuK 56 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 56. Page Addendum MP-3-27 states, "River cells from MODFLOW's river boundary conditions package were placed in the model to simulate the Tongue River and Goose Creek." Please provide a conceptual discussion supported by field observations on the type/nature of interaction of these streams with groundwater (Gaining stream vs. losing stream). (MK)

Response MuK 56 – Round 1

As described in Section 2.3 of MP-3, the dip of the strata in the project area is generally east-southeast into the Powder River Basin and the groundwater flow direction follows this trend regionally. As such, the Tongue River comes into contact with the coal seams of interest near the updip side of the coal seams. Interactions between the surface water and groundwater occur at those points where permeable formations sub-crop into alluvial/surface water bodies. Both the Carney and the Masters coal subcrop under the Tongue River near the western edge of the model domain. Conceptually these subcrops are the only places where the coals would be in contact with the surface water. Section 2.3 of Addendum MP-3 describes the conceptual groundwater flow in some detail.

As described in Addendum MP-3 Section 2.3, the Carney coal is largely dry to the north and west of its subcrop into the Tongue River alluvium and becomes saturated at an elevation just above the elevation where it subcrops beneath the Tongue River alluvium. Therefore it is likely that the Carney Coal would lose water to the Tongue River alluvium. The potentiometric surface in the Masters Coal is roughly the same as the potentiometric surface of the Tongue River where the Masters coal subcrops beneath it. A review of the steady state groundwater model shows that where the River boundary cells are immediately above the Masters Coal the net effect is that the River boundary cells input approximately 3.2 gpm into the model. Conversely, near the upper and lower Carney Coal/Tongue River outcrops the River cells are taking roughly 0.16 gpm out of the model. Since the coal outcrops occur beneath the Tongue River there is no way to field verify these flows but conceptually they do seem reasonable.

The river boundary cells extend to the bottom of the layer in which they are placed as discussed in response to comment MUK 74 and MUK 84. The River boundary cells were placed in Layer 1 to the confluence of Goose Creek and the Tongue River which extends east of the area where the Carney Coal would be in communication with the Tongue River alluvium. Due to the fact that the River boundary cells extend to the bottom of the layer they do provide a conduit for the River to provide recharge into the Carney Coal even though the River would be physically separated from the coal by multiple zones of low permeability shales. The estimated recharge occurring in this area from the Tongue River to both layers 1 and 2 is approximately 8 gpm. The discharge into the coals is likely conservatively overestimated and not all of the 8 gpm would necessarily end up in the coal as some of it also discharges to layer 1. As such, the model conservatively estimates that up to 11.2 gpm would be discharged from the river to the coals or overburden between the Carney Coal and the Tongue River.

The strata located above the coal seams of interest is generally claystone with low permeability as discussed in MP-3 Section 2.2. Therefore, interaction of groundwater between these units and the Tongue River or Goose Creek is very limited. Within the model domain, the Tongue River Alluvium does have large deciduous trees and other vegetation immediately adjacent to the river. Conceptually, evapotranspiration from the vegetation along the Tongue River would indicate that through the model domain the Tongue River is a losing Stream. Throughout most of the model domain where the Tongue River is present, there low permeability overburden strata between the Tongue River alluvium and the coal seams which hydrologically isolate the Tongue River from both the Masters and the Carney coal seams. Since Goose Creek is located in the eastern portion of the model domain where the coal is significantly below the alluvium and the clay intervals are even thicker, the Goose Creek alluvium is also hydrologically separated from the Masters and Carney Coals. The Goose Creek alluvium would likely see similar losses to evapotranspiration that would be observed in the Tongue River alluvium.

Comment MuK 56 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 56 – Round 2

Text from this response has been incorporated into Addendum MP-3 Sections 2.3 and 4.7.2 as appropriate.

Comment MuK 56 – Round 3

Response accepted.

Comment MuK 57 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 57. Please provide a discussion on any contribution of groundwater baseflow to the major surface water bodies within the permit boundary. (MK)

Response MuK 57 – Round 1

As described in the response to comment MuK 56, conceptually, very little groundwater base flow from the Carney and Masters coal seams are expected to contribute to the surface water bodies within the permit boundary. The mass balance table provided in response to comment MuK 73 demonstrates that much more water is expected to enter the groundwater system from the surface water bodies (river cells) than is contributed to the surface water bodies from groundwater baseflow.

Comment MuK 57 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 57 – Round 2

The context of this response has been added to Addendum MP-3 via additional text to address comments MuK 56 and MuK 73. Specifically, text additions to Addendum MP-3 Section 4.10 include the context of the Round 1 response.

Comment MuK 57 – Round 3

Response accepted.

Comment MuK 58 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 58. In section 3.2 MODFLOW Input Files, was aerial recharge used as an input file? Please clarify if evapotranspiration was considered as a discrete input or lumped into net aerial recharge. (MK)

Response MuK 58 – Round 1

Yes, the recharge package was used as an input file. Section 3.2 of Addendum MP-3 was updated to include a discussion of the recharge package. The evapotranspiration (ET) package was not utilized in the model. To address the effects of ET, the recharge rates were adjusted down in proportion to the estimated losses created by ET. Within most of the model domain where evapotranspiration would occur, the low permeability overburden between the surface and the coal seams of interest provide a hydrologic barrier so the evapotranspiration was ignored in these areas.

Comment MuK 58 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 58 – Round 2

Addendum MP-3 Section 4.2.2 was updated to incorporate the context of the Round 1 response.

Comment MuK 58 – Round 3

Response accepted.

Comment MuK 59 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 59. Page Addendum MP-3-31 states, "Layer 1 – represents the coal overburden". Please clarify if the alluvial aquifer was included in the model. Please provide justification for not considering the alluvial aquifer in the model. (MK)

Response MuK 59 – Round 1

As described in the responses to comments MuK 56 and MuK 57, the only place within the model domain where there is potential for interactions between any alluvial aquifers and the coal seams of interest is where the coal is directly below the Tongue River alluvium or Slater Creek colluvium. Where the coal is in direct contact with alluvium/colluvium, layer 1 (the coal overburden) was assigned a higher vertical hydraulic conductivity to allow the layer to better emulate the alluvial/colluvial aquifer in this location. This zone of higher hydraulic conductivity in layer 1 is depicted on Addendum MP-3 Figure 4.2-1. Groundwater Vistas does not allow discontinuous layers throughout the model domain so this allowed the alluvium/colluvium to be effectively be modeled without the need to add an additional layer across the top of the entire model domain. This helped to improve the computational efficiency of the model. Since the overburden has a very low hydraulic conductivity and hydrologically separates the coals from the other alluvial/colluvial deposits within a large portion of the model domain, there is no reason to model any additional alluvial/colluvial deposits. To help clarify this comment Figure 4.2-1, was prepared and sections 2.5 and 4.2 of MP-3 have been updated.

Comment MuK 59 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 59 – Round 2

With the addition of the text to address comments MuK 56 and Muk 57 as well as the text added to Addendum MP-3 Section 4.2.1, the context of this comment has been incorporated into Addendum MP-3.

Comment MuK 59 – Round 3

Response accepted.

Comment MuK 60 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 60. Page Addendum MP-3-31 states, "Layer 3- Carney Interburden. This interval is generally of low to very permeability in the western portion of the Project Area". Please clarify how the areas where Layer 3-Carney Interburden is absent are treated in the groundwater model. (MK)

Response MuK 60 – Round 1

Ground Water vistas does not allow discontinuous layers. Therefore, Layer 3 is continuous across the entire model domain. Where the coal seam coalesces on the east portion of the model, the Layer 3 interburden was modeled as coal by setting hydraulic properties of the layer equivalent to the values of the overlying and underlying coal seams. Additional text has been added to Section 4.2.1 of Addendum MP-3 to further describe how the hydraulic conductivities were assigned to layer 3.

Comment MuK 60 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 60 – Round 2

The context of the Round 1 response has been incorporated into Addendum MP-3 Section 4.2.1.

Comment MuK 60 – Round 3

Response accepted.

Comment MuK 61 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 61. Please include a discussion of the thickness of all model layers. (MK)

Response MuK 61 – Round 1

Addendum MP-3 Section 2.5 describes the thickness of the various coal seams. Additional text has been added to MP-3 Section 4.1 to generally describe the thickness of each layer. Following are the modeled thicknesses for each layer:

- Layer 1-The thickness for this layer varies throughout the model domain. Near the western side of the model the layer is often absent where all the strata geologically younger than the Carney coal has been eroded off. These areas are generally represented as no flow cells in the model. Within the eastern portion of the model Layer 1 can be substantial. In the model the maximum thickness of Layer 1 in the eastern side of the model domain was approximately 1,100 feet.

- Layer 2-The Upper Carney coal was modeled with a constant thickness of 7 feet throughout the model.

- Layer 3-The Carney coal interburden layer varied in thickness from 4 feet up to 15 feet within the active portion of the model.

- Layer 4-The Lower Carney coal was modeled with a constant thickness of 8 feet within the model.

- Layer 5 The Carney/Masters coal interburden layer varied in thickness from 4 feet up to 107 feet within the model.

- Layer 6-The Masters coal was modeled with a constant thickness of 6 feet within the model.

Comment MuK 61 – Round 2

Response not accepted. It is acknowledged that Section 4.2.1 provides the thickness of the model layers. Also, the response states, "*Addendum MP-3 Section 2.5 describes the thickness of the various coal seams.*" Addendum MP-3, Section 2.5 does not describe the thickness but it is a section on hydraulic properties. Please clarify. (MK)

Response MuK 61 – Round 2

The previous sections reference was incorrect. Addendum MP-3 Section 2.5.1.3 provides a statement regarding the thickness of the Carney Coal. Addendum MP-3 Section 2.5.1.4 provides a statement regarding the thickness of the Masters Coal.

Comment MuK 61 – Round 3

Response accepted.

Comment MuK 62 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 62. Please include a justification for not considering the underlying zones beneath the Masters coal seam in the model. (MK)

Response MuK 62 – Round 1

The Masters coal is underlain by the Lebo Shale. The Lebo Shale is a thick (Appendix D5 Section D5.2.3), regional confining interval in the project area as described in Mine Plan Addendum MP-3 Section 2.1. There are no aquifer units identified within the model domain within the Lebo Shale with direct hydrologic connection to any of the elements of the model. Since the Lebo Shale is a regional confining unit, if it had been included in the groundwater model, it would have been assigned hydraulic parameters typical of a shale interval (very low hydraulic conductivity) and it would have essentially been a no flow barrier to the more permeable Masters coal above it. Groundwater Vistas treats the bottom of the model as a no flow boundary. Therefore, the Lebo Shale is for all practical purposes included in the model as a confining interval with the way the model is currently defined.

Comment MuK 62 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 62 – Round 2

The second to last paragraph in Addendum MP-3 Section 4.1 incorporates the context of the Round 1 response.

Comment MuK 62 – Round 3

Response accepted.

Comment MuK 63 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 63. Please provide appropriate cross section(s) of the model grid overlaid with the drill hole data collected during baseline characterization. This will help the evaluation of the adequacy of model layer thicknesses against the stratigraphic field data. (MK)

Response MuK 63 – Round 1

As noted in Addendum MP-3 Section 4.1, the Groundwater model layers were developed from a 3D geologic model developed from drill hole data within the project area developed for the purposes of making volumetric coal estimates. Minor updates to the surfaces were made where new data provided by additional exploration drilling was completed. An additional figure was developed (Addendum MP-3 Figure 4.1-3) and included in Addendum MP-3 that depicts actual cross sections cut from the groundwater model. Addendum D5-3 of Appendix D5 includes geologic cross sections with drill hole data that can be compared back to the actual cross sections included in Figure 4.1-3 of Addendum MP-3.

Comment MuK 63 – Round 2

No comment received.

Response MuK 63 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 64 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 64. Please clarify how the layers were modeled to represent the confined/unconfined aquifer types. (MK)

Response MuK 64 – Round 1

Groundwater Vistas has a "layer type" control that was set to #5: Confined/Unconfined, which allows the model to determine whether to use storativity or specific yield for the storage coefficient based on the elevation of the water elevation vs. formation tops. Groundwater Vistas handles the aquifer type classification without further inputs.

Comment MuK 64 – Round 2

Response not accepted. It is acknowledged and noted that GW Vistas handles it in an automated mode. Please provide a description on if there were any additional checks conducted on the results from the groundwater model to verify if the aquifer type used by GW Vistas is consistent with the conceptual model and field data. Example discussion: Are the deeper layers confined for the entire simulation or do they change from confined to unconfined due to mine operations? (MK)

Response MuK 64 – Round 2

Within the model domain the coal aquifers are relatively thin, ranging in thickness from 4 to 15 feet. Because the coal aquifers are relatively thin, during the model simulation the coals were typically either confined or dry. The only place where unconfined conditions occurred in the groundwater model simulations were near the outcrops or in the cells immediately adjacent to cells that went dry during the modeling simulations. Similarly, during mining simulations the cells immediately next to the mining areas became unconfined as well. When the water level in a cell drops below the top of the layer, Groundwater Vistas treats that cell as an unconfined aquifer which means that instead of using the specific storage term to calculate the amount of water in storage, the program uses specific yield to calculate the amount of water in storage. The total area of unconfined coal aquifer was relatively small as compared to the portion of the aquifer that was dry or fully saturated. Due to the relatively small area of potential unconfined aquifer, no specific analyses were conducted to determine whether changes in the specific yield in the unconfined aquifer would affect model calibration.

Comment MuK 64 – Round 3

Response accepted.

Comment MuK 65 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 65. In addition to model calibration, please provide justification for the recharge rates applied in the model including any literature references. (MK)

Response MuK 65 – Round 1

The initial recharge rates utilized in the model were initially estimated based on a USGS study (Water-Resources Investigations Report 01-4278) conducted on the eastern side of the Powder River basin and the Black Hills area. The study entitled, "Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 1931-98." was prepared by J.M. Carter and D.G. Driscoll. In the study Carter and Driscoll reported recharge rates varying from 0.04 inches per year to 2.93 inches per year. The 2.93 inch per year recharge rate was reported within the Madison limestone formation outcrops in the Black Hills while the lower range of recharge rates reported by Carter and Driscoll were estimated for areas in the eastern periphery of the Powder River Basin where the precipitation and soil types are similar in nature to the Brook Mine Permit area. Since calibrated recharge rates in the key recharge areas (the coal outcrops and the scoria outcrops) were within the range of values developed by Carter and Driscoll, the recharge rates used in the model are considered reasonable. Please note that the recharge rate throughout Layer 1 is much lower than the range of recharges developed by Carter and Driscoll. This is reasonable because much of Layer 1 has no hydrologic connection to the underlying coal seams. Additional justification for recharge rates applied in the model is discussed in response to comment BJ57.

Comment MuK 65 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 65 – Round 2

Addendum MP-3 Section 4.2.2 has been updated to incorporate the context of the Round 1 response.

Comment MuK 65 – Round 3

Response accepted.

Comment MuK 66 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 66. Page Addendum MP-3-33 states, "Recharge is applied within the modeling software by applying the recharge to the highest active layer." Please clarify the presence of any modeled 'dry cells' in the model and the influence of applying the recharge to the layers below the dry cells. (MK)

Response MuK 66 – Round 1

As noted in the responses for comments MuK 59 and MuK 60, Groundwater Vistas does not allow for discontinuous layers across the model domain. Along the north and the west sides of the model there is a good portion of the model domain where the upper layers have been eroded off and do not actually exist. These areas of erosion were accounted for using no flow cells. As shown on Figures 4.4-1 through 4.4-4 of Addendum MP-3, the no flow cells in the top layer are the largest in areal extent while each underlying layer has a slightly decreased areal extent of no flow cells. In this case the no flow cell distribution was adjusted to match the outcrop of each layer. The fact that the software applies the recharge to the highest active layer was taken advantage of during the modeling process, since it is an effective way to apply recharge to an outcropping layer which is under another layer that is eroded away but due to software limitations is still present in the model.

Because CBM operations have generally removed most of the water from the coal seams, there are some locations within the model domain where dry cells during the modeling have caused cells in layer 1 to go dry and the recharge is applied to the next active layer below. While this could be problematic if a high recharge rate were assigned to the model cells, generally throughout the model domain the recharge rate is very low. Therefore, this results in a very minor amount of water coming into the model and did not significantly affect the model calibration.

Comment MuK 66 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 66 – Round 2

Addendum MP-3 Section 4.2.2 has been updated to incorporate the context of this response.

Comment MuK 66 – Round 3

Response accepted.

Comment MuK 67 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 67. Table 4.2-3. lists model porosity values. Typically, MODFLOW (flow model) does not use porosity in its calculations. Please clarify the need for this input parameter. (MK)

Response MuK 67 – Round 1

Modflow does not utilize porosity as part of its calculations. However, other modules included in the Groundwater Vistas package such as MODPATH do utilize porosity. In the case of this model, no MODPATH simulations were conducted. Therefore, the porosity term as put into the model has no impact on the calculations. However, porosity is a hydraulic parameter of the aquifer and may be important for future modeling simulations, therefore, the porosity values developed for each aquifer/aquitard unit will be left in the model report. Minor changes to the text in Addendum MP-3 have been made to clarify the role of porosity in this model.

Comment MuK 67 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 67 – Round 2

The context of the Round 1 response was incorporated into Addendum MP-3 Section 4.2.3 as part of the first round of comment responses.

Comment MuK 67 – Round 3

Response accepted.

Comment MuK 68 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 68. The faults are not modeled in Layer 1. Please clarify the procedure for determining the vertical extents of the faults in the model. (MK)

Response MuK 68 – Round 1

The composition of Layer 1 is predominately claystone. Because Layer 1 is not composed of aquifer material and because the hanging and footwalls are composed of strata with similar hydraulic properties, displacement due to faulting does not substantially change the flow through the aquitard and placing Horizontal flow barriers in the model in layer 1 was not necessary.

Comment MuK 68 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 68 – Round 2

Addendum MP-3 Section 4.4.1 was updated to incorporate the context of the Round 1 response.

Comment MuK 68 – Round 3

Response accepted.

Comment MuK 69 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 69. Please provide the input parameters used to model the horizontal flow barriers in the model and discuss their technical reasonableness. (MK)

Response MuK 69 – Round 1

Horizontal Flow Barriers were used in the model to simulate no-flow boundaries created by faulting within the project area. Horizontal flow barriers require two input parameters in Groundwater Vistas including wall thickness and hydraulic conductivity. The input parameter used in the model for wall thickness was 10 feet and a hydraulic conductivity of 1.0 x 10^-5 ft/day was used. The horizontal flow barrier parameters as applied will essentially limit all but a very minor amount of flow across the barrier. As described in the response to comment MuK 51, the coal seams within the project area are relatively thin as compared to the fault offsets so it is reasonable to assume that the faults will significantly impede flow in the aquifer units.

Comment MuK 69 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 69 – Round 2

Addendum MP-3 Sections 4.4.2, 4.4.3, and 4.4.4 were updated to incorporate the context of the Round 1 response.

Comment MuK 69 – Round 3

Response accepted.

Comment MuK 70 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 70. Page Addendum MP-3-40 states, "As the current, post-CBM potentiometric surface is considered the static level……." Please provide the implications of this assumption, on the model calibration of hydraulic parameters and the mode predicted hydrologic impacts (over estimation of drawdown vs. underestimation) (MK)

Response MuK 70 – Round 1

Addendum MP-3 Sections 4.8.1, 4.10, and 4.11 all discuss the implications of CBM impacts. In addition, the response to comment MuK 53 also discusses CBM impacts to water levels. As discussed in the response to comment MuK 53, the model conservatively assumed that CBM operations have lowered the water levels in the eastern portion of the model domain to a level near the top of the coal seams. To simulate this drawdown, the elevations of each general head boundary on the east side of the model were set at an elevation just above the top of the coal seam. The general head boundaries elevations remained the same in both the steady state and the transient models. Essentially, this means that the model operated under the assumption that the post CBM impacts were permanent prior to and after the Brook Mine mining activities.

The assumption that the water levels have been permanently impacted by CBM did have a significant impact on model calibration. The severely depressed water levels caused by CBM operations have resulted in a large number of cells going dry. The hydraulic parameters of the aquifer units within the eastern portion of the model domain were not adjusted to eliminate the dry cells since it is reasonable to assume that, with the severe drawdown modeled, the coal seams could have been dewatered in these areas. Therefore, even though the effects of the CBM drawdowns were observed during calibration, no specific adjustments were made to the modeled aquifer characteristics to eliminate these impacts. The dry cells did complicate calibration of the model because they cause instability in the MODFLOW model calculations and results.

The model was developed to take into account impacts from the combined effects of CBM and the proposed coal mining. In general, CBM development impacts are significantly larger than the predicted impacts from the Brook Mine. Therefore, ignoring CBM impacts would have significantly under predicted the potentiometric surfaces within the model domain and overestimated the impacts that Brook Mine would have on the system.

Many of the CBM wells are actively being plugged and abandoned. If this trend continues, there is a chance that recovery of water levels from CBM impacts may begin which will result in recharging of the coal seams. If this happens, it is anticipated that the model conservatively over predicts the impacts to the region especially in the long term recovery scenarios.

Comment MuK 70 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 70 – Round 2

Most of the discussion in the original comment has already been incorporated into Addendum MP-3 with the first round of comment responses. However, an additional concluding statement from this response was added to Addendum MP-3 Section 4.11 to incorporate the context of the Round 1 response into the permit application.

Comment MuK 70 – Round 3

Response accepted.

Comment MuK 71 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 71. It is noted that Table 4.7-1 summarizes the calibration residuals and statistics from the calibrated model. Please consider providing additional presentations of the calibrated model statistics. This will enable an easier evaluation of any spatial bias in the model calibration. (MK)

a. X-Y plot of observed vs. simulated water levels.

b. A map plotting the residuals to show the spatial distribution

c. Provide a summary statistics table with Mean Error, Mean Absolute Error, Sum of Squared residuals for the calibrated model. It is noted that some of these values are presented in the sensitivity analysis. However, a compiled summary statistics table would be very helpful.

Response MuK 71 – Round 1

As requested the following additions have been made to the groundwater model report:

A. An X-Y plot of observed versus simulated water levels has been added in the report as Addendum MP-3 Figure 4.7-1.

B. The residuals have been added to figures 4.7-2, 4.7-3, and 4.7-4 of Addendum MP-3.

C. Table 4.7-1 of Addendum MP-3 has been updated to include additional statistics.

Comment MuK 71 – Round 2

No comment received.

Response MuK 71 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 72 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 72. In addition, to the measured water levels, please clarify if there were any flow measurements used for model calibration. (MK)

Response MuK 72 – Round 1

There are no areas within the model domain where it was possible to collect any flow measurements that would support the modeling effort therefore, no flow measurement were used in the calibration.

Comment MuK 72 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 72 – Round 2

Discussion was added Addendum MP-3 Section 2.6 to clarify that no measurements of seepage at the outcrop were available. Also, text has been added to Section 4.7.2 clarifying that there are no measurements available for water that may leave or enter the Tongue River from the coal seams.

Comment MuK 72 – Round 3

Response accepted.

Comment MuK 73 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 73. Please provide a water budget table (in acre-feet per year or cubic-feet per day) showing all the inflows into the model and outflows from the model.

Response MuK 73 – Round 1

The following tables summarizes the inflows and outflows from the model domain during the steady state period, 5 years into mining, the end of mining, and at the end of recovery.

Mass Balance of Steady State Calibrated Model		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
General Heads	16,107	22,890
River	2,569	410
Drains	-	560

Recharge	5,168	-
Total	23,846	23,860

Mass Balance 5 years into Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	12,496	11,431
General Heads	16,130	22,904
River	2,688	385
Drains	-	1,774
Recharge	5,434	-
Total	36,749	36,494

Mass Balance End of Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	3,670	4,146
General Heads	16,135	22,902
River	2,705	365
Drains	-	532
Recharge	5,430	-
Total	27,941	27,945

Mass Balance End of Recovery		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	1,698	2183
General Heads	16,138	22,901
River	2,714	363

Drains	-	535
Recharge	5,427	-
Total	25,978	25,983

Comment MuK 73 – Round 2

Response conditionally accepted. Please incorporate the tables into the permit application. (MK)

Response MuK 73 – Round 2

Addendum MP-3 Section 4.10 has been updated to include the water budget. Specifically, Table 4.10-1 includes the mass balance throughout the mining simulations. A cross reference to the mass balance discussion in Addendum MP-3 Section 4.10 was also added to Addendum MP-3 Section 4.6 for clarity.

Comment MuK 73 – Round 3

Response accepted.

Comment MuK 74 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 74. Please provide a comparison of model simulated inflows and outflows against conceptual estimates of inflows and outflows. This comparison will act as another verification/check for the technical adequacy of the groundwater model (Example model GHB flows vs. reasonable estimated conceptual flows). (MK)

Response MuK 74 – Round 1

Response to comment MuK 73 includes tables that show the inflows and outflows from the model during the steady state period, 5 years into mining, the end of mining, and at the end of recovery. The five main categories of inflows and outflows include 1) storage, 2) general head boundaries, 3) river boundaries, 4) drains, and 5) recharge. Following is discussion regarding model predicted inflows and outflows for each category:

1) Storage – During the steady state model there is no inflow or outflow from storage so storage is not included in the first mass balance table in prepare for comment MuK 73. The model predicts that during active mining more water will come out of storage than will go into storage. Conceptually this is reasonable since during mining, water from the coals would be draining into the mined out areas. There is a trend of water continuing to come out of storage even after mining ceases. Even though the volume of water coming out of storage is quite low, it is contrary to the conceptualization of the system to have

water leaving storage after mining because at this point water should be going back into storage. This phenomenon is attributed to the fact that many of the cells in the model go dry during mining because CBM operations have significantly dewatered the coals and there is not much water available in storage (see comment MuK 70). When the cells go dry, MODFLOW treats them as no flow areas and there can be a ripple effect that causes additional cells going dry. Since MODFLOW is not very efficient at rewetting dry cells when they should be resaturated, this ripple effect has caused permanent changes in the model. Over a long time the model would be expected to come to a steady state condition. The tables prepared in response to comment MuK 73 indicate that even at the end of recovery, the model is not yet at the new equilibrium that would eventually be reached with the additional dry cells.

2) General Head Boundaries – The amount of water going into and out of the model domain via the general head boundaries remains relatively consistent throughout the modeled operations. This is reasonable because the general head boundaries are a long distance from the mining area and would not be expected to be significantly impacted by mining. In addition, the total volume of outflows from the general head boundaries generally balances the inflows from other sources. This is conceptually correct.

3) River Boundaries – The conceptual inflow and outflow from the coals to the Tongue River are discussed in detail in comment MuK 56. Groundwater Vistas does apply the River Boundary cells to the bottom of the layer in which they are inserted. The Tongue River Boundary cells were inserted into the model up to the point where Goose Creek joins the Tongue River. At that location the top of the Carney coal is estimated to be approximately 100 feet below the surface. Since the alluvium is generally much thinner in this area and there is actually a large amount of low permeability strata between the Tongue River alluvium and the coal (described in comment MuK 56), the model likely overestimates the contribution of the River boundary cells to the model because the river boundary cells provide a direct connection (in the model) between the river and the coals where there is not a physical connection. This conservatively over estimates how much water discharges from the River Boundary Cells to the model.

4) Drains – One drain was placed into layer 1 in the northeast side of the model domain to allow water to drain from the model where the Tongue River crosses the domain boundary. This represents the amount of water in layer 1 lost to the surface water system. The total discharge from this drain during steady state conditions is 560 ft^3/day (2.9 gpm). While no physical measurements were (or can be) made to verify this amount, conceptually it is reasonable. The strata along the Tongue River likely does discharge a small amount of water to the River where it cuts through the numerous perched sand lenses that become saturated from natural recharge. There is no evidence of large groundwater

discharges to the Tongue River in this area so it makes sense that a small discharge to the River (rather than a large discharge) would be observed in the model. During mining, drains were added to the model to remove water from the mine pits. The tables indicate that during mining the discharges from the drains do increase as expected. After mining is complete, discharges from the drains return approximately to premining levels which is conceptually correct.

5) The recharge amount used in the model stays at relatively the same level throughout the simulations. Total recharge across the model area is approximately 28 gpm. As is described in comment #65 the recharge rates are reasonable based on available studies.

Comment MuK 74 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. In addition, clarify the reason for increased recharge from the steady state to transient models (5,138 vs 5,434 cu.ft/day).

Response MuK 74 – Round 2

Addendum MP-3 Section 4.10 was updated to include the context of the Round 1 response. The model was also reviewed to determine why there was a slight difference in the recharge rates during the steady state simulation and the transient simulation period (5,168 vs 5434 cu ft/day). During the review of the model it was found that one of the recharge options in the MODFLOW options dialogue box was incorrect. The check box in the dialogue box entitled "Apply recharge from stress period 1 to all stress periods" had not been checked. After checking the option, the model was rerun and during the subsequent run the recharge was the same during the steady state portion and the transient portion of the model. Other minor changes in the mass balance numbers presented in Table 4.10-1 were also noted and the numbers were updated to reflect the model predicted values after changing the recharge settings.

Comment MuK 74 – Round 3

Response not accepted. Please provide the revised model files for the LQD review and records.

Response MuK 74 – Round 3

New Groundwater Vistas files configured to run in Groundwater Vistas Version 6.80 Build 1 are provided on a DVD with this submittal. Please see response to Comment 32 for details.

Comment MuK 75 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 75. Page Addendum MP-3-40 states, "Due to a system of thin aquifers with similar sources and sinks and homogeneous hydraulic conductivities, the head values of the steady-state model were nearly

identical between the separate coal layers as noted in Table 4.7-1." Please clarify whether this statement implies that the interburden (where present) between the coal seams is not a confining unit. (MK)

Response MuK 75 – Round 1

This statement is an observation only based on review of modeled values and does not suggest a lack of confinement exists. Pumping tests conducted in separate aquifers demonstrated that the interburden provides confinement between the Carney and Masters aquifers as described in Section D6-8.3.2.3 of Appendix D6. In addition, Table 4.7-1 of Addendum MP-3 shows that at each cluster where both coal seams contained measureable water, the difference in measured water levels between the coal seams was higher than the modeled difference. This suggests that the vertical hydraulic conductivity assigned to the interburden in the model may be higher than the actual hydraulic conductivity of the interburden in the field. The use of a higher hydraulic conductivity for the interburden in the model will overestimate the drawdown in the other coal seam therefore, the predicted drawdown will be conservative.

Comment MuK 75 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 75 – Round 2

The last sentence in the first paragraph of Addendum MP-3 Section 4.7.2 has been revised for clarification. The Round 1 responses have been incorporated into Addendum MP-3.

Comment MuK 75 – Round 3

Response accepted.

Comment MuK 76 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 76. In figures 4.7-1, 4.7-2 and 4.7-3, please consider including the observed/interpreted water level contours and the measured water level elevations. This will enable to visually evaluate the observed vs. simulated water levels. (MK)

Response MuK 76 – Round 1

Figures 4.7-1, 4.7-2, and 4.7-3 of Addendum MP-3 have been updated to include both observation wells and observed elevations as well as observed potentiometric contours. Please note that in response to Comment MuK 71 an additional figure was added to this section (Figure 4.7-1) and these figures have since been renumbered to 4.7-2, 4.7-3, and 4.7-4.

Comment MuK 76 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 76 – Round 2

The figures previously added to the report (4.7-2, 4.7-3, and 4.7-4) during the first round of comment responses incorporate the context of the Round 1 response into Addendum MP-3.

Comment MuK 76 – Round 3

Response accepted.

Comment MuK 77 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 77. Page Addendum MP-3-45 states, "…….and if CBM production ceases, recovery rates will likely be higher than estimated in the model." Please clarify if this statement implies that currently, there are CBM wells that are operational in the area and are pumping out groundwater. (MK)

Response MuK 77 – Round 1

Although substantially less than past years, some CBM wells in the area are still producing groundwater. Since CBM production has been ongoing for the last 15+ years the CBM operations have significantly lowered the water levels in the coals as is noted in the report. Records of groundwater withdrawals can be found on the Wyoming Oil and Gas Conservation Commission's (WOGCC) online database at: wogcc.state.wy.us. According to WOGCC records there has been no groundwater production associated with CBM in Townships 57 and 58N Range 84W since 2012. However production is still occurring in Townships 57 and 58N Range 83W as well as Township 56N Range 83 and 84W. The portions of the model domain where CBM production may occur are located in Townships 56 and 57N Range 84W.

Comment MuK 77 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 77 – Round 2

Additional text was added to Addendum MP-3 Section 2.3 to describe the timeframe over which CBM wells have been in operation. Also Addendum MP-3 Section 4.8.1 was updated to further capture the context of the Round 1 response.

Comment MuK 77 – Round 3

Response accepted.

Comment MuK 78 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 78. Please consider removing the model sensitivity to storage coefficients and porosity. Steady state groundwater model equations do not include these parameters in any of the model calculations. (MK)

Response MuK 78 – Round 1

As noted in this comment, the final model did not include a transient calibration and a sensitivity analysis on storage coefficient and porosity is not appropriate. The section and discussion regarding model sensitivity to the storage coefficient and porosity has been updated and removed as appropriate.

Comment MuK 78 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 78 – Round 2

Addendum MP-3 Section 4.8.5 (last two sentences) was previously updated during the first round of comment responses to incorporate the context of the Round 1 response.

Comment MuK 78 – Round 3

Response accepted.

Comment MuK 79 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 79. Please clarify if the faults in the model and their parameters were considered in any of the sensitivity analyses. If not, please consider performing a detailed and thorough sensitivity analysis, as the faults appear to influence the drawdowns simulated by the groundwater model. (MK)

Response MuK 79 – Round 1

The faults do influence the drawdowns and flow patterns simulated in the groundwater model. However, as noted in the response to comment MuK 51 the displacement observed in the faults roughly 5 times as thick as the modeled coal seams. Given the fact that the dominant lithology in the area is low permeability claystone/siltstone, it is very likely that where faulting has occurred the displacement has resulted in coals being immediately adjacent to the low permeability strata. Therefore the faults are assumed to be hydrologic barriers to water flow. Based on the best available mapping, these faults have been placed into the model. Because the faults are physical parameters that were developed along with development of the geological model (i.e. elevations and thicknesses of the geological layers), a sensitivity analysis was not performed on the faults.

Part of the reason that the faults influence the groundwater responses in the groundwater model to the degree that they do is because of the CBM impacts. Because the CBM operations have significantly lowered the water levels in the coal seams, the faults create a shadow effect that results in many of the cells immediately downstream of the faults going dry. If there had not been any CBM dewatering operations performed in the coals, the water levels would be significantly higher and the effects of the faults would not be as pronounced.

Comment MuK 79 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 79 – Round 2

The context of the Round 1 response has been added to Addendum MP-3 Section 2.4.1.

Comment MuK 79 – Round 3

Response accepted.

Comment MuK 80 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 80. In addition to the simulated drawdown maps, please consider providing hydrographs at strategically selected locations. This will enable a better presentation of the impacts over time. (MK)

Response MuK 80 – Round 1

As suggested, Appendix A has been added to Addendum MP-3 which depicts the modeled water elevations during the model simulation period at all the water supply wells identified within the model domain (CBM wells excepted) and at selected alluvial target locations within the model domain.

Comment MuK 80 – Round 2

Response not accepted. Appendix A is missing with the electronic files provided to the Cheyenne Office. The hydrographs will be reviewed after the receipt of this Appendix A. (MK)

Response MuK 80 – Round 2

All the appendices for Addendum MP-3 for the first round of comment responses were inadvertently left out of the submittal. Both Appendix A and B are included in this round of comment responses.

Comment MuK 80 – Round 3

Response accepted.

Comment MuK 81 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 81. Please clarify if the three wells listed in Table 4.9-1 are the only wells considered for the analysis. Also, provide a discussion on the methodology to narrow down the analysis from several wells shown in the groundwater rights maps to these three wells. (MK)

Response MuK 81 – Round 1

Additional wells beyond those originally presented in Table 4.9-1 were considered in the analysis. Table 4.9-1 has been updated to include all the wells considered in the analysis. To determine which wells were included in the analysis, completions were compared to modeled surfaces to estimate which formation in which the well was completed. Those thought to be completed in the Carney/Masters sequence were included. Please note that the wells included in Table 4.9-1 error on the side of being over inclusive. Some of the wells are believed to be completed in multiple zones but the analysis assumes that they are only completed in the coal seams of interest. In addition, the well depths were determined based on the State Engineer's database and in many cases well depth data was left blank or was questionable. If there was a question whether a well was actually completed in the coal aquifer of interest the well was assumed to be completed in the coal. Therefore, the well list may include some wells that are not completed in the coals of concern.

Comment MuK 81 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 81 – Round 2

The context of the Round 1 response was added to Addendum MP-3 Section 4.9 during the first round of comment responses. In addition to updating Table 4.9-1, the text was also updated with verbiage from the round 1 comment response to describe how the wells were chosen for inclusion into the model.

Comment MuK 81 – Round 3

Response accepted.

Comment MuK 82 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 82. Please provide (or reference) a discussion about the three wells listed in Table 4.9-1, their depths, screened intervals and other pertinent information. (MK).

Response MuK 82 – Round 1

Table 4.9-1 has been updated to include total depth as well as the screen intervals for all the wells. Additional details on the wells can be found in Adjudication Appendix B.

Comment MuK 82 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 82 – Round 2

Addendum MP-3 Table 4.9-1 was previously updated as noted in the round 1 comment responses. Between the updated text in response to comments and this table, the context of this comment response have been captured in Addendum MP-3.

Comment MuK 82 – Round 3

Response accepted.

Comment MuK 83 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 83. Page Addendum MP-3-60 states, " To measure the impacts to the Tongue River and Goose Creek, a series of targets were placed along these drainages in Layer 1" Please define the term target. Also, clarify if these targets are located in the alluvial aquifer. (MK)

Response MuK 83 – Round 1

The targets as used in Groundwater Vistas are simply locations where heads are measured and compared with measured heads (if there are any available). Ground Water Vistas generates a hydrograph throughout the transient period of mining and recovery for each target. These targets were placed in Layer 1 to estimate the impacts of mining to surface water bodies. These targets are located where the alluvial aquifer is simulated in Layer 1. Targets representing existing well locations were also put in layers 4 and 6 as well as discussed in Comment MuK 81.

Comment MuK 83 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 83 – Round 2

Additional text was added to Addendum MP-3 Section 4.9 to define what a target is. Also, the inclusion of Appendix A has been included with this round of comment responses, which was inadvertently left out of the first round of comments. The appendix should also help incorporate the context of the Round 1 response.

Comment MuK 83 – Round 3

Response accepted.

Comment MuK 84 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 84. Page Addendum MP-3-60 states, "These targets demonstrate that the estimated maximum impact to Tongue River Alluvium is conservatively estimated to reach 2.5 feet drawdown near the river." Please expand the discussion on the impacts to surface water flows including translating the drawdown to an estimated decrease in the groundwater baseflows to Tongue River and Goose Creek. (MK)

Response MuK 84 – Round 1

As shown on the hydrographs included in Appendix A, the maximum water level decline of 2.5 feet to the Tongue River alluvium occurred permanently and was caused by dry cells. This 2.5 foot drawdown is not believed to be a real drawdown because it resulted from model instability rather than a real predicted result. If the model did not have dry cells that caused permanent changes in the model, the maximum drawdown due to mining is estimated to be less than 0.5 feet.

As noted in the response to comment MuK 56, the model estimates the coals will contribute a relatively insignificant amount to water to the base flow of the Tongue River. As noted in Comment MuK 73 in the steady state model the River contributed approximately 2,569 cubic feet per day to the model while the river received 410 cubic feet per from the model. The net result is that in the steady state model 2,159 cubic feet per day (11.2 gpm) was contributed from the river to the model. For comparison, at the end of mining, the River contributed 2,714 cubic feet per day to the model and received 363 cubic feet per day from the model. The net result at the end of mining was that 2,351 cubic feet per day (12.2 gpm) was contributed from the River to the model. Over the simulated mining period the model estimates that the increased contribution of flow from the River to the model will be 1 gpm which represents approximately a 9% increase in flow.

Please note that in Groundwater Vistas the river boundary cells go to the bottom of the layer which likely overestimates the impacts to the River. Within the eastern portion of the model domain the coal aquifers can be 200 or more feet below the level of the river while the Tongue River Alluvium is estimated to be between 15 and 30 feet thick based on the thickness of alluvial wells constructed by Big Horn Coal in the area. Therefore, within the eastern portion of the model domain, the coals may be significantly below the alluvium and no River boundary was included in this portion of the model. However, there is an intermediary region where the actual level of the River is some 30-70 feet higher than the coals. At these locations the River boundary cells were left on to conservatively show the impacts to the river. However, the alluvium in these areas is likely thinner than 40-70 feet. As a result, the model allows the River to

directly contribute water to the coals below and the model is expected to overestimate the impacts to the Tongue River in these locations.

Comment MuK 84 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)

Response MuK 84 – Round 2

Additional text was added to Addendum MP-3 Sections 2.6.3 and 4.9 to incorporate the context of the Round 1 response. Also, text was added to Section 4.10 in response to Comment MuK 73 which helps capture the context of the Round 1 response.

Comment MuK 84 – Round 3

Response accepted.

Comment MuK 85 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 85. Please provide a statement on any hydrologic impacts predicted by the groundwater model to areas outside the Brook mine permit boundary. (MK)

Response MuK 85 – Round 1

The only impacts outside of the Brook Mine Permit Boundary would be observed at the existing water supply wells. Table 4.9-1 describes the estimated impacts at all the water supply wells in the Model domain that will be impacted both inside and outside of the Brook Mine Permit Boundary. Please note that most of these wells are located outside of the Brook Mine permit boundary. As shown on Table 4.9-1 the largest model predicted impact seen at any existing well outside of the Brook Mine Permit boundary is 20 feet which would be observed at P48251W. As shown in the hydrograph for this well in Addendum MP-3 Appendix A, this impact is estimated to be short lived (approximately 4 years). Model predicted drawdowns at the rest of the wells are less than 5 feet. At many of the wells predicted drawdowns are less than 1 foot over the life of the mine.

Comment MuK 85 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)

Response MuK 85 – Round 2

Additional text to capture the context of the Round 1 response has been added to Addendum MP-3 Section 4.11.

Comment MuK 85 – Round 3

Response accepted.

Comment MuK 86 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 86. Please provide a discussion on the simulated impacts caused by mining to surface water – groundwater interaction within the model domain. (MK)

Response MuK 86 – Round 1

Please see the response to comment MuK 84.

Comment MuK 86 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)

Response MuK 86 – Round 2

Additional text has been added to Addendum MP-3 to incorporate the context of the Round 1 response (also see response to MuK 84).

Comment MuK 86 – Round 3

Response accepted.

Comment MuK 87 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 87. Please compare the model simulated water balance between pre-mining, during mining and post mining conditions. Consider including a table that presents the water balance during select periods showing the flows from all sources and discharges to all the sinks within the model domain. Provide a detailed discussion addressing any changes in the model simulated water balance between pre-mining, during mining and post mining conditions. (MK)

Response MuK 87 – Round 1

Please see responses to comments MuK 73 and MuK 74. A detailed discussion is included in the responses to these comments.

Comment MuK 87 – Round 2

Response accepted. (MK)

Response MuK 87 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 88 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 88. In addition to the maps presented on the recovery estimates, please provide hydrographs at strategically selected locations. This will enable a better presentation of recovery over time. (MK)

Response MuK 88 – Round 1

As described in response to Comment MuK 80, an appendix (Appendix A) has been added to Addendum MP-3 which depicts the modeled water elevations at a number of well and target locations within the model domain.

Comment MuK 88 – Round 2

Response not accepted. Appendix A is missing with the electronic files provided to the Cheyenne Office. The hydrographs will be reviewed after the receipt of this Appendix A. (MK)

Response MuK 88 – Round 2

Appendix A will be included with this second round of comment responses.

Comment MuK 88 – Round 3

Response accepted.

Comment MuK 89 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 89. The modeling documentation lacks discussion on the backfill aquifer. In the recovery model, please clarify how the model treats the backfill aquifer (spoils aquifer) and its resaturation. Please provide a discussion (or reference) to the hydraulic properties of the backfill materials used to create the backfill aquifer and the aerial extent of the backfill aquifer. (MK)

Response MuK 89 – Round 1

Mine Plan Section 4.10 discusses the backfill aquifer. Within the areas where the highwall miner is used for mining, an open cavern will be left behind. Unless the mined out areas collapse, the backfill aquifer is essentially an open cavern with 100% porosity. The modeling software used for this effort does not have the ability to transiently change aquifer properties, and during resaturation of the mined areas the assigned storage coefficients remained the same as the original aquifer properties. As a result, the model may underestimate the time that it takes for the aquifer to resaturate where the mining methods have increased the porosity and thereby resaturation volume. Inversely, in the slots mined with traditional open cut mining

techniques, coal will be removed and replaced with overburden material. In these locations the backfilled material is expected to have poor aquifer characteristics because it will primarily be a mix of fine grained clay and silt with some sand. In these areas the aquifer will essentially be removed. Again, the modeling software does not have the ability to transiently change aquifer properties and this effect was ignored during the modeling.

Figure MP-3-4.9-1 shows the areal extent of mining and Addendum MP-3 Figures 4.7-2, 4.7-3, and 4.7-4 depict the areas that were modeled as dry within the Brook Mine permit area. It is important to note that a large percentage of the area that will be mined is dry prior to the initiation of mining. In addition, figures in MP-3 Section 4 show that after mining, some of the areas go dry and do not rewet. In the areas where slots are excavated this prediction is reasonable because the backfill will act as an aquitard with poor aquifer characteristics. A layer by layer review of the mined area at the end of mining was conducted to determine conceptually how ignoring the changes in the coal porosity and changes in backfill material may have impacted the model predictions.

Upper Carney-With exception of a very small portion of mine block 9 (Figure MP-3-4.9-1). The entire Upper Carney coal is unsaturated. Therefore, there is no resaturation and no recovery. The model estimates are appropriate for the Upper Carney coal.

Lower Carney - Most of the mine blocks as well as the open slots are dry in the Lower Carney at the end of mining. Only mine blocks 1, 2, 5, 9, and 10 had substantial portions that were saturated. As a result, the potential error created by transient aquifer properties in model predicted resaturation rates to the underground mined coal blocks in the Lower Carney coal, if any, is expected to be very low. With the exception of the slots cut to mine blocks 5, 9, and 10, all of the slots cut to mine the Carney Coal will also be dry; therefore, resaturation at those locations will not substantially impact model predictions. The slots cut for blocks 9 and 10 generally run parallel to the direction of water flow. If the coal in these locations is completely removed and replaced with an aquitard, the impact to the aquifer will be minimal because water will simply flow around the portion of the backfilled aquifer. The open pit slot cut adjacent to mine block 5 does run perpendicular to the direction that water is flowing and may change the groundwater flow patterns in this area. However, the location of the slot is near the groundwater divide caused by the fault just to the south. Therefore, this slot is not expected to substantially impact groundwater flows either

Masters - Most of the Masters Coal mine blocks are saturated. Only blocks, 4, 5, 6, and 7 have substantial areas that are not saturated. In the mine blocks where underground mining techniques are employed the model may underestimate the time it takes for resaturation to occur because the storage coefficient is not updated to account for the increased porosity of the mined out block. However this resaturation time will be balanced out by the fact that there will be no aquifer replaced in the open cuts to resaturate, and thus these areas would not resaturate as the model predicts.

With the exception of the open cut for mine block 5, all of the open cuts are oriented so that they will have minimal impacts on the natural flow gradients in the wellfield or are located within or adjacent to dry areas. As previously noted, the open cut near mine block 5 is located adjacent the drainage divide so it will not significantly change the water flow within the aquifer.

Due to the fact that much of the mined area is dry, the actual area mined that is below the water table is relatively small, and that the open cuts are oriented such that they have minimal impacts to groundwater flow, the recovery analysis performed by the model is reasonable. Also, as noted, the areas where underground mining is employed and the model overestimates the rate at which the aquifer is resaturated are counterbalanced by the areas of open cuts where the aquifer will not be replaced and the model underestimates the time it takes for the strata to resaturate.

Comment MuK 89 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 89 – Round 2

Text from this comment response was added to Addendum MP-3 Section 4.10 to capture the context of the Round 1 response.

Comment MuK 89 – Round 3

Response accepted.

Comment MuK 90 – Round 1

Mine Plan, Addendum MP-6 Subsidence Control Plan, 90. Figure MP6.1-1 shows "Monarch Seam Surface Only Mining". Please clarify if the Monarch seam is targeted for mining in the appropriate sections of Appendix D5, Appendix D6 and mine plan. (MK)

Response MuK 90 – Round 1

The appropriate sections of Appendix D5 and D6 have been updated.

Comment MuK 90 – Round 2

No comment received.

Response MuK 90 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 98 – Round 3 verbal comment via phone call with WWC 12-2-15

Please provide additional clarification describing why the model predicted discharge from the Tongue River to the underlying layers using the River Cells is conservatively over estimated.

Response MuK 98 – Round 3 verbal comment via phone call with WWC 12-2-15

The text in Addendum MP-3 Section 4.7.2 (Page 50) has been updated to further clarify that the model predicted discharge from the Tongue River to the underlying layers is conservatively high. Please also see Addendum MP-3 Section 2.6.3 (pg 29) for additional discussion on the contribution of water from the Tongue River to the groundwater system.

Reclamation Plan

Comment BJ 57 – Round 1

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-37, The narrative describes the sources of recharge to the coal seams. One lithology mentioned as a positive recharge contributor is the overlying burn, scoria, or clinker material, generated by coal fires. It is a common misunderstanding that the scoriaceous material recharges coal or overburden. It would appear, at first glance, that the broken, vuggy material would be capable of conveying large amounts of water from the surface to materials beneath. That is not the case, however, as the coal/scoria interface has a zone of partially metamorphosed coal ash that lies between the burned material and the remnant coal. I have seen this zone many times during my 25 year career in the coal mines when supervising coal and overburden removal. This zone is characterized by a white to light gray, clay band that ranges in thickness from 6 inches to a foot or more. It is the same high silica ash found in the bottom ash of the local power plants that burn PRB coal. This ash band acts as an aquaclude, preventing water from entering or escaping the coal. Because of this, any recharge models that were run using the scoria as a recharge source must be reevaluated using new layers that do not include the scoria. Rerun recharge models if needed.

Response BJ 57 – Round 1

It is true that the partially metamorphosed coal ash layer between the coal and the scoria has the potential to limit recharge from the scoria to the coal. However, even though the permeability of this layer is low, there will be areas where the coal has collapsed or other geologic variances such as a thinning section which will allow for water from the scoria to come into contact with the coal. Therefore, even though the scoria may not be directly in contact with the coal, there is still a recharge component to the scoria, albeit; significantly lower than if the scoria and coal were in direct contact. This low recharge rate is reflected in the groundwater model. The calibrated recharge rate used in the groundwater model for the areas covered by scoria was 0.35

inches per year. For comparison purposes, the recharge rates assigned to the Carney and Masters outcrops, where no scoria was present, varied from 0.2 to 0.88 inches per year. Considering that in the scoria areas a very large percentage of direct precipitation is expected to infiltrate into the scoria, the 0.35 inch per year recharge rate represents a significant reduction in the amount of water available (which could be upwards of 10 inches per year) to infiltrate into the coal seams. Therefore, the calibrated recharge rate included in the groundwater model does take into account the low permeability layer between the coal and the scoria.

Comment BJ 57 – Round 2

No comment received.

Response BJ 57 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 58 – Round 1

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-39, The second sentence in the first paragraph has an odd, difficult to understand syntax. Please rewrite the sentence for clarity.

Response BJ 58 – Round 1

Revised page RP-39 text as requested. The sentence will now read "The mine will consult with WDEQ/LQD to determine the number of spoil wells that will be tested".

Comment BJ 58 – Round 2

No comment received.

Response BJ 58 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 65 – Round 1

EXHIBITS, Reclamation Plan, Exhibit RP.6-1, The permit boundary on this map is inaccurate. Please recreate the permit boundary layer.

Response BJ 65 – Round 1

Revised Exhibit RP. 6-1 as requested.

Comment BJ 65 – Round 2

No comment received.

Response BJ 65 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 66 – Round 1

EXHIBITS, Reclamation Plan, Exhibit RP.8-3 and Exhibit RP.8-4, The post mining potentiometric surfaces for the Carney and Masters beds are suspended in mid-air over Slater Creek. Please terminate the contour lines at the outcrop or use a dotted line to indicate the calculated potentiometric surface.

Response BJ 66 – Round 1

Revised Exhibit RP.8-3 and RP.8-4 as requested.

Comment BJ 66 – Round 2

No comment received.

Response BJ 66 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 24 – Round 1

Reclamation Plan, Section RP.4. This brief section discusses what is considered spoil material to be removed during mining. The section states that spoil does not include coal, but there are some very narrow coal seams with numerous stringers of clay or of such low quality that will probably not be mined and will be placed in backfill. Also, the top layers of most coal seams are quite "dirty" and would also be removed and backfilled. In order to provide the readers with a more accurate description of the mining and reclamation processes, please revise the text to show that some coal-laden materials will also be considered spoils and will be backfilled during reclamation.

Response DS 24 – Round 1

Revised text as requested.

Comment DS 24 – Round 2

No comment received.

Response DS 24 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 25 – Round 1

Reclamation Plan, Section RP.5.2. Please provide a description of the methods used to control topsoil depth during replacement. Most mining operations use stakes with surveyed marks as guides for controlling soil application depths.

Response DS 25 – Round 1

See Section RP.5.4 for a description of the methods used to control topsoil depth during replacement.

Comment DS 25 – Round 2

No comment received.

Response DS 25 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 26 – Round 1

Reclamation Plan, Section RP.5.4. Variability in topsoil depth cannot be avoided due to limitations imposed by the equipment used and the pre-application preparations which may include ripping of the compacted overburden surface. Typically, the depth of topsoil application may vary 25%, but the average depth should be closely monitored and should not exceed the average availability. Also, because some soils exhibit unsuitable characteristics and will not be used for reclamation, discussion of the use of substitute topsoil materials is warranted in this section.

Response DS 26 – Round 1

Revised text as requested. Added discussion about substitute topsoil being an option if not enough suitable topsoil is salvaged.

Comment DS 26 – Round 2

No comment received.

Response DS 26 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 27 – Round 1

Reclamation Plan, Section RP.5.6. Sediment control measures will be required to prevent untreated runoff from exiting reclaimed lands onto adjacent native lands. Please provide a discussion of the sediment control measures to be used.

Response DS 27 – Round 1

Revised text as requested.

Comment DS 27 – Round 2

Response is not adequate. Use of ASCMs during mining and following reclamation as sediment control must follow the requirements of Guideline 15. Brook Mine must provide some detail about how the ASCMs will be sized, certified, permitted and terminated. ASCMs may not be used within ½ mile of the Tongue River. Please provide requested information in the Mine Plan.

Response DS 27 – Round 2

In response to Comment MK 116 (Round 2), ASCMs have been removed as the primary form of sediment control within half of a mile of the Tongue River and Goose Creek. In the place of ASCMs within the half-mile buffer, sediment impoundments have been designed. These designs are now provided in Addendum MP-2. Design standards for ASCMs, inspection and maintenance standards for ASCMs, and ASCM removal and site reclamation standards are provided in Addendum MP-1.

Comment DS 27 – Round 3

Response is not adequate. The text in Section 5.6 is not adequate. ASCMs or sediment reservoirs/sumps must be used to control sedimentation from disturbed/reclaimed lands onto adjacent native lands until Phase 2 Bond Release Verification has been approved. The text must be changed to clearly show the types of sediment control that will be used until Phase 2 Bond Release Verification has been approved.

Response DS 27 – Round 3

The text has been revised in Section RP.5.6 to state that sediment measures will be in place until sediment control release has been obtained.

Comment DS 28 – Round 1

Reclamation Plan, Section RP.8.2. This section states only that impoundments will require Landowner, LQD and SEO approval. Prior to construction of post mining impoundments, SEO approved plans for the impoundments must be submitted for inclusion in the permit Reclamation Plan. Please include a statement that a Reclamation Plan revision will be approved by the LQD prior to construction of impoundments.

Response DS 28 – Round 1

Revised Section RP.8.2 to include a statement regarding LQD approval before the construction of postmine impoundments.

Comment DS 28 – Round 2

No comment received.

Response DS 28 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 29 – Round 1

Reclamation Plan, Section RP.11.1. The primary final land use for the permitted acreage will be grazing and wildlife. Only areas where the current use is industrial will remain industrial land uses after mining is completed. Therefore, in order for any constructed buildings or railroad access to remain following mining, and a permit revision to change the land use will be required. It is not just a matter of demonstrating usefulness to the LQD and receiving landowner consent. This will be a major revision to the permit that will require public notice. Clarification should be provided concerning the steps involved to allow building to remain.

Response DS 29 – Round 1

Revised text as requested. Eliminated discussion in Section RP.11 regarding leaving any buildings, facilities, and equipment following completion of mining.

Comment DS 29 – Round 2

No comment received.

Response DS 29 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 30 – Round 1

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30 – Round 1

See Mine Plan MP.1.6 for a description of permit terms and initial year. Revised text in Reclamation Plan Section RP.13 to reference Mine Plane MP.1.6. Revised Exhibit RP.5-1 adding "Note: Year 3 corresponds to the year 2019" in Legend.

Comment DS 30 – Round 2

No comment received.

Response DS 30 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 33 – Round 2 (New Comment)

New Comment: Reevaluate the average topsoil replacement depth based on salvage depth estimates shown in Appendix D7 and expected disturbance of each soil series during mining. 18 inches may not be adequate.

Response DS 33 – Round 2 (New Comment)

The topsoil depth has been revised in the first paragraph of Section RP.5.4.

Comment DS 33 – Round 3

No comment received.

Response DS 33 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DE 19 – Round 1

Reclamation Plan, Section RP.5.1, page RP-6 – RAMACO states that the contoured surface will be scarified or ripped, if necessary. The mine should commit to scarifying or ripping all surfaces prior to topsoil replacement.

Response DE 19 – Round 1

Revised text as requested. Remove "if necessary" from sentence.

Comment DE 19 – Round 2

No comment received.

Response DE 19 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 20 – Round 1

Reclamation Plan, Section RP.5.6, page RP-8 - The 1st sentence of the 2nd paragraph doesn't make sense. Please correct.

Response DE 20 – Round 1

Revised text as requested. The sentence now reads "Rills and gullies occurring in redistributed soil precluding the achievement of the approved postmining land use or the reestablishment of vegetative cover will be rectified".

Comment DE 20 – Round 2

No comment received.

Response DE 20 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 21 – Round 2 (New Comment)

There still has been no Reclamation Bond Estimate submitted at this time so there is nothing to review.

Response DE 20 – Round 2 (New Comment)

Reclamation Bond calculations are pending.

Comment DE 21 – Round 3

The applicant still has not submitted any reclamation bond but Western Water has scheduled a meeting to discuss the bond for November 5, 2015. I cannot recommend approval of this permit application until an adequate reclamation bond has been submitted.

Response DE 20 – Round 3

A reclamation bond estimate has been provided as part of the Round 3 response package.

Comment JJ 5 – Round 1

Reclamation Plan, 5. Exhibit RP 6-1 also displays permit boundary discrepancies in regards to the section lines on it and those located on the Adjudication Exhibit 1. Please update accordingly.

Response JJ 5 – Round 1

See response to comment BJ 65. Revised Exhibit RP.6-1 as requested.

Comment JJ 5 – Round 2

No comment received.

Response JJ 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment JJ 6 – Round 1

Reclamation Plan, 6. Table RP 6-1 states that there are 11.6 acres of wetlands and other aquatic resources. Please discuss where these acres are to be reclaimed and show them on the Exhibit RP. 6-1 which displays the reclaimed vegetation communities and their locations.

Response JJ 6 – Round 1

Revised Section RP.9 to include reference to Exhibit RP.6-1 for location of reclaimed wetlands and OAR. Revised Exhibit RP.6-1 to include reclaimed wetlands and OAR locations.

Comment JJ 6 – Round 2

No comment received.

Response JJ 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 24 – Round 1

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, Assuming the Tongue River is an AVF, this section should discuss how the essential hydrologic functions will be maintained and/or reestablished, as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(ii). As noted in Comment No. 21, the essential hydrologic functions of the Tongue River AVF need to be identified and a monitoring system needs to be installed. (MDK)

Response MK 24 – Round 1

Revised text as requested in Section RP.10.

Comment MK 24 – Round 2

Response not accepted. Please provide a more thorough discussion for each identified essential hydrologic function to demonstrate that the functions will be maintained throughout the mining operation. In particular, since mining is predicted to cause some amount drawdown in the Tongue River alluvium (Mine Plan Addendum MP-3), this needs specific discussion to demonstrate that the essential hydrologic functions will be maintained and/or reestablished.

Please also provide more detail on the plan and frequency of analyzing the aerial imagery. In addition, please note that given that Mine Plan Addendum MP-3 predicts some amount of drawdown in the alluvium of the Tongue River, installation of alluvial monitoring wells would be required to monitor the AVF. Otherwise there will be no way to assess the validity of the predicted drawdowns. Please provide a more detailed plan for installing the alluvial monitoring well(s). (MDK)

Response MK 24 – Round 2

The text at the end of Section RP.10 has been revised to include the pertinent details on the essential hydrologic function monitoring plan. The plan includes obtaining infrared photography every 5 years and photo documentation annually, as well as installing and monitoring alluvial wells on the Tongue River and Goose Creek during mining and reclamation periods. Exhibit RP.8-5 has been revised to include the proposed locations of the alluvial wells. Also, Guideline 9 Alluvial Valley Floors has been added to the Reference Section RP.17.

Comment MK 24 – Round 3

Response not accepted. Please see review of the response to Comment MK 21 and state in the text in Section RP.10 that the three proposed wells will be installed prior to commencing any mining-related disturbance. (MDK)

Response MK 24 – Round 3

A sentence stating alluvial monitoring wells will be installed prior to commencing mining related disturbance was added to Section RP.10.

Comment MK 25 – Round 1

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 25. As noted in Comment No. 21, the adjacent Goose Creek AVF also needs a monitoring system to demonstrate essential hydrologic functions are maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 25 – Round 1

Revised text as requested in Section RP.10.

Comment MK 25 – Round 2

Response not accepted. Please revise the discussion on the Goose Creek AVF monitoring system as per the response to Comment MK 24. (MDK)

Response MK 25 – Round 2

See response MK 24 for discussion on the Goose Creek AVF monitoring system.

Comment MK 25 – Round 3

Response accepted.

Comment MK 26 – Round 1

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 26. This section may also need to be addressed if the LQD finds that other AVFs exist on or near the permit area. If AVFs are determined to be present, the essential hydrologic functions must be maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 26 – Round 1

Revised text as requested in Section RP.10.

Comment MK 26 – Round 2

No comment received.

Response MK 26 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 75 – Round 1

Reclamation Plan, Section RP.3.3 Postmine Slope Analysis, 49. Please provide a discussion that compares the pre-mine vs. post-mine slope characteristics. A table would be helpful that compared the minimum, maximum, and average slopes under pre-mine and post-mine conditions. (MDK)

Response MK 75 – Round 1

Added Table RP.3-1 comparing premining and postmining slopes. Updated Section RP.3.3 of text to include reference to the new table.

Comment MK 75 – Round 2

No comment received.

Response MK 75 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 76 – Round 1

Reclamation Plan, Section RP.3.5 Drainage Reestablishment, 50. It is stated that mining will disturb portions of the Slater Creek channel and the reclamation will entail reconstruction. However, the Mine Plan PHC (Section MP.6.1) stated that Slater Creek

"will still flow naturally around the trench", and "Because Slater Creek's flow will not come into contact with mining activities, no impact will be made to water quality". Please provide a clear and explicit description of the extent of direct disturbance to the Slater Creek channel. This description should be consistent between the Mine Plan and Reclamation Plan. (MDK)

Response MK 76 – Round 1

As stated in the revised Section MP.6.1 of the Mine Plan, the only anticipated surface disturbance to Slater Creek during mining will be the redirection of the channel through a culvert under a proposed haul road. No text was edited in response to this comment.

Comment MK 76 – Round 2

No comment received.

Response MK 76 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 77 – Round 1

Reclamation Plan, Section RP.4.2 Mitigation of Unsuitable Material , 51. Minor channels are defined as ephemeral streams but there is no definition provided for "major channels". Please provide a definition and also illustrate an example of a major channel within the proposed permit boundary that would fit into this category. (MDK)

Response MK 77 – Round 1

Revised text in Section RP.4.2 to provide the definition of major channels.

Comment MK 77 – Round 2

No comment received.

Response MK 77 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 78 – Round 1

Reclamation Plan, Section RP.5.6 Erosion Control and Conservation Practices, 52. The first sentence of the second paragraph…"Rills and gullies…" needs revised, as it appears to be missing one or more words. (MDK)

Response MK 78 – Round 1

See response to Comment DE 20. Text revised as requested.

Comment MK 78 – Round 2

No comment received.

Response MK 78 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 79 – Round 1

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 53. The second sentence discusses stockponds possibly being disturbed by mining activities. The Mine Plan PHC did not mention that any existing stockponds would be disturbed by mining activities. If stockponds are to be disturbed by the mining operation, this should be discussed in the Mine Plan PHC. (MDK)

Response MK 79 – Round 1

The text in the Mine Plan PHC has been revised to clarify the disturbance to stockponds within the permit area. Section RP.7.4 has been revised to clarify the anticipated aquatic habitat locations.

Comment MK 79 – Round 2

No comment received.

Response MK 79 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 80 – Round 1

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 54. The text states that two additional postmine impoundments will be constructed and their location is shown in Exhibit RP.3-1. This Exhibit shows ten permanent impoundments, both on and adjacent to the proposed permit area. Please revise this discrepancy in the text or change the symbology in the Exhibit to clearly show the two permanent post-mine impoundments. (MDK)

Response MK 80 – Round 1

Revised text in Section RP.7.4. to clarify the postmine impoundment locations.

Comment MK 80 – Round 2

No comment received.

Response MK 80 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 81 – Round 1

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 55. Please add the major stream name labels (Tongue River, Goose Creek, East Fork Earley Creek, Slater Creek, Hidden Water Creek) to Exhibit RP.8-1. (MDK)

Response MK 81 – Round 1

Revised Exhibit RP.8-1 as requested.

Comment MK 81 – Round 2

No comment received.

Comment MK 81 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 82 – Round 1

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 56. Please explain in the text how the postmine drainage basin parameters in Table RP.8-1 were determined. (MDK)

Response MK 82 – Round 1

Revised text in Section RP.8.1 as requested.

Comment MK 82 – Round 2

No comment received.

Response MK 82 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 83 – Round 1

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 57. The text states that a comparison of drainage basin parameters in Table RP.8-1 and Exhibit RP.8-1 show that the overall hydrologic balance will remain largely unchanged. This conclusion is not obvious from the Table and Exhibit. How similar are the postmine drainage basin parameters to the pre-mine parameters? Which sub-drainages show the largest change from pre-mine conditions? The text needs to include a more thorough discussion to demonstrate to the reader why exactly the postmine hydrologic balance will be unchanged. (MDK)

Response MK 83 – Round 1

Revised text to include reference to Appendix D6 tables and exhibits regarding drainage basin parameters. Minor disturbance and mining methods contribute to the largely unchanged postmine drainage basin parameters.

Comment MK 83 – Round 2

No comment received.

Response MK 83 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 84 – Round 1

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 58. The text provides no discussion of the comparison between the pre-mine and postmine modelled discharge values. Please provide this discussion so the reader can determine if the differences are minor or major. (MDK)

Response MK 84 – Round 1

Revised text in Section RP.8.1.1 as requested.

Comment MK 84 – Round 2

No comment received.

Response MK 84 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 85 – Round 1

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 59. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section RP.17. (MDK)

Response MK 85 – Round 1

Revised text as requested.

Comment MK 85 – Round 2

No comment received.

Response MK 85 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 86 – Round 1

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 60. Similar to Comment No. 8 made for Appendix D6, the HEC-HMS runoff estimates in Table RP.8.4 are much higher than the Miller (2003) equations. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) regression equations.

Response MK 86 – Round 1

See response to Comment MK 34. No revisions to the text were made.

Comment MK 86 – Round 2

No comment received.

Response MK 86 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 87 – Round 1

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, The last sentence in the first paragraph states that stream reaches for which designed cross sections are provided are identified in plan on Exhibit RP.8-1. There is nothing on this Exhibit that shows which stream reaches have designed cross sections, nor which stream channels are being reconstructed. Please clearly identify this information on this Exhibit. (MDK)

Response MK 87 – Round 1

Exhibit RP.8-1 has been revised as requested.

Comment MK 87 – Round 2

No comment received.

Response MK 87 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 88 – Round 1

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 62. Exhibit RP.8-2 shows that the main Slater Creek channel will not be disturbed. Please consider this in light of Comment No. 50 that requested clarification on the extent of disturbance to the Slater Creek channel. (MDK)

Response MK 88 – Round 1

See response to Comment MK 76(referred to as Comment No. 50). Revised Exhibits RP.8-1 RP.8-2 as requested. A reconstructed Slater Creek (Figure RP.8-9) cross section has been added to reflect the correct disturbance boundary.

Comment MK 88 – Round 2

No comment received.

Response MK 88 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 89 – Round 1

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 63. On Page RP-35, second paragraph, it references "reclaimed Slater Creek channel" and channel hydraulics are presented in Table RP.8-5. It is not clear why channel hydraulics are presented for Slater Creek when it will not be disturbed. Is this because reclaimed tributaries to Slater Creek are changing such that the main channel of Slater Creek is expected to be change? Please clarify this in the text. (MDK)

Response MK 89 – Round 1

Slater Creek is included Table RP.8-5 to show that the postmine Slater Creek Channel will be hydraulically similar to premine conditions after mining and reclamation operations have been completed as reclamation of a portion of Slater Creek is expected.

Comment MK 89 – Round 2

No comment received.

Response MK 89 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 90 – Round 1

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 64. It is unclear exactly how many new postmine impoundments will be constructed. Table RP.8-6 identifies two impoundments (Enhancement Stock Pond 1 and Replacement Stock Pond 1), and these are shown in Exhibit RP.3-1. Exhibit RP.3-1 shows eight other permanent impoundments. Please identify if these are new features to be constructed or if they are existing stockponds that may be affected by the mining operation. (MDK)

Response MK 90 – Round 1

The text in Section RP.8.2 has been revised to clarify that only the new features to be constructed are displayed in Table RP.8-6. Affected existing stockponds will be constructed approximately to premine conditions.

Comment MK 90 – Round 2

No comment received.

Response MK 90 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 91 – Round 1

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 65. Please identify in this section if there will be a net increase or decrease in post-mine water storage capacity relative to pre-mine capacity. (MDK)

Response MK 91 – Round 1

Revised text in Section RP.8.2 to clarify a net increase in water storage capacity is expected due to the addition of two postmine impoundments.

Comment MK 91 – Round 2

No comment received.

Response MK 91 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 92 – Round 1

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 66. As mentioned Comment No. 47, it is advised that the applicant discuss with the SEO-Interstate Streams Division any implications for the Yellowstone Compact if new water storage features are proposed that potentially decrease water quantity to the Tongue River. (MDK)

Response MK 92 – Round 1

See response to Comment DS 28(Comment No. 47 mentioned above). Revised text as requested.

Comment MK 92 – Round 2

Response not accepted. The response referenced Comment DS 28, which did not mention consulting with the SEO about the Yellowstone Compact. As indicated in the

response to Comment MK 73, RAMACO is aware of the Yellowstone Compact and will act in accordance with the guidelines outlined. Please add a similar statement to Section RP.8.2. (MDK)

Response MK 92 – Round 2

The text in Section RP.8.2 Permanent Impoundments has been revised in the second paragraph to acknowledge that RAMACO will obtain a permit from the SEO, therefore any implications to the Yellowstone Compact will be analyzed by the SEO.

Comment MK 92 – Round 3

Response accepted.

Comment MK 93 – Round 1

Reclamation Plan, Section RP.8.4.2 Surface Water Monitoring, 67. The text on Page RP-40 states that the surface water monitoring stations are shown on Exhibit RP.8-4. However, the stations are not shown on this Exhibit. It may be make the most sense to add these to Exhibit RP.8-5 and rename the Exhibit "Postmine Hydrologic Monitoring Locations" so the surface water stations and monitoring wells are on one Exhibit. (MDK)

Response MK 93 – Round 1

Revised the reference in text to state "locations of these sites are shown on Exhibit RP.8-5". Exhibit RP.8-5 was revised to include surface water monitoring stations and renamed as requested. Table RP.8-9 was edited to include all planned surface water stations including postmine impoundment monitoring sites.

Comment MK 93 – Round 2

No comment received.

Response MK 93 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 94 – Round 1

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 68. The text on Page RP-41 states that water quality samples will be collected at each of the postmine impoundments listed in Table RP.8-6 and presented on Exhibit RP.3-1. Please clarify in the text that this sampling list includes all ten impoundments shown. (MDK)

Response MK 94 – Round 1

Revised text in Section RP.8.4.3 to reference Table RP.8-9 and Exhibit RP.8-5 for postmine surface water monitoring sites including postmine impoundments.

Comment MK 94 – Round 2

No comment received.

Response MK 94 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 95 – Round 1

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 69. Please add the list of impoundments to be sampled to Table RP.8-9 "Surface Water Monitoring Sites". (MDK)

Response MK 95 – Round 1

Revised Table RP.8-9 as requested.

Comment MK 95 – Round 2

No comment received.

Response MK 95 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 96 – Round 1

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 70. The postmine impoundments to be sampled appears to be slightly different from the impoundments listed in Mine Plan Table MP.7-1 "Operational Surface Water Monitoring Locations". Table MP.7-1 lists three impoundments (Hall Reservoir, Black Mountain No. 1 Stock Reservoir, and Legerski Bros #1 Stock Reservoir) that are not listed as postmine impoundments to be sampled. Please explain why there is a difference in the operational monitoring and postmine monitoring of some impoundments. (MDK)

Response MK 96 – Round 1

Black Mountain No.1 Stock Reservoir has been added as a postmine impoundment that will be monitored. Legerski No. 1 Stock Reservoir and Hall Reservoir are outside of the areas planned for mining disturbance, however in an effort to further monitor the surface water of the Brook Mine permit area, the reservoirs were added to be sampled quarterly during mining. Table RP.8-9 and Exhibit RP.8-5 have been updated to include Black Mountain Reservoir No. 1 Stock Reservoir.

Comment MK 96 – Round 2

No comment received.

Response MK 96 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 97 – Round 1

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 71. In the second full paragraph on Page RP-41, "The water quality samples.." please also state that the water quality samples will be compared against WDEQ/WQD Class III groundwater standards, as suggested by LQD Guideline No. 17 for replacement and enhancement stockponds. (MDK)

Response MK 97 – Round 1

Revised text as requested in Section RP.8.4.3.

Comment MK 97 – Round 2

No comment received.

Response MK 97 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 98 – Round 1

Reclamation Plan, Section RP.8.5.2 Surface Water, 72. At the end of the first paragraph on Page RP-44, it predicts a "slight change" in event peaks and volumes. Please further discuss what is meant by a "slight change", i.e., what is the magnitude of the increase or decrease? (MDK)

Response MK 98 – Round 1

Section RP.8.5.2 has been updated to reflect the change in event peaks and volumes will be less than one percent when compared to premining conditions.

Comment MK 98 – Round 2

No comment received.

Response MK 98 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 99 – Round 1

Reclamation Plan, Section RP.8.5.2 Surface Water, 73. In the second paragraph on Page RP-44, please clarify the extent of direct mining disturbance to Slater Creek versus tributaries of Slater Creek. This comment relates to previous Comments No. 50 and 62. (MDK)

Response MK 99 – Round 1

See response to Comments MK 76 (comment No. 50) and Mk 88 (Comment No. 62).

Comment MK 99 – Round 2

No comment received.

Response MK 99 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 100 – Round 1

Reclamation Plan, Section RP.8.5.2 Surface Water, 74. Please provide a discussion as to whether the planned postmine impoundments will affect surface water quantity on or downstream of the proposed permit area. (MDK)

Response MK 100 – Round 1

Section RP.8.5.2 has been revised to include discussion of the effect of postmine impoundments to the surface water quantity on and downstream of the proposed permit area.

Comment MK 100 – Round 2

No comment received.

Response MK 100 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 101 – Round 1

Reclamation Plan, Section RP.9.1 Introduction, 75. The second paragraph references Appendix D8. Should this be Appendix D10 (Wetlands)? Please revise this if necessary. (MDK)

Response MK 101 – Round 1

The reference has been revised to D10 as requested.

Comment MK 101 – Round 2

No comment received.

Response MK 101 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 102 – Round 1

Reclamation Plan, Section RP.9.1 Introduction, 76. Please add a statement up front in the Wetland Mitigation section that the USACE has not yet issued a jurisdictional determination for the proposed Brook Mine. Please also provide a statement in the text that the information in Section RP.9 may be subject to change pending the USACE determination. The USACE jurisdictional determination should also be incorporated somewhere into the Mine Permit once that is received by the Brook Mine. (MDK)

Response MK 102 – Round 1

Sections RP.9.1 has been revised as requested.

Comment MK 102 – Round 2

No comment received.

Response MK 102 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 103 – Round 1

Reclamation Plan, Section RP.14 Bond Release, 77. The LQD no longer requires a bond release verification for "sediment control release". This is now termed "surficial stability verification". More information is available in LQD Guideline No. 23. Please revise the text for this change. (MDK)

Response MK 103 – Round 1

The text in Section RP.14 has been revised by removing the reference to sediment control release.

Comment MK 103 – Round 2

Response accepted. However please note that RAMACO may wish to also cite LQD Guidelines No. 20, 21, 22, 23, and 25, as these are key documents for assisting operators with bond release procedures. (MDK)

Response MK 103 – Round 2

The text in Section RP.14 Bond Release has been revised to include discussion of WDEQ/LQD Guidelines No. 20, 21, 22, 23 and 25 for bond release. In addition, the Guidelines mentioned above have been added to Section RP.17 References.

Comment MK 103 – Round 3

No comment received.

Response MK 103 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment MK 118 – Round 2 (New Comment)

In Section RP.3.4 Erosion and Sedimentation Control Practices, the first sentence on Page RP-4 references sedimentation impoundments. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 118 – Round 2 (New Comment)

The Mine Plan has been revised to state that sedimentation impoundments will be required. Designs for sedimentation impoundments required in the first five years of operations are now provided in Addendum MP-2. Therefore, the reference to sedimentation impoundments in the Reclamation Plan has been left in place.

Comment MK 118 – Round 3

Response accepted.

Comment MK 119 – Round 2 (New Comment)

In Section RP.8.5.2 Surface Water, the third sentence of the last paragraph on Page RP-46 references sedimentation reservoirs. As noted in the response to Comment MK 49, sedimentation reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation reservoirs are not planned. (MDK)

Response MK 119 – Round 2 (New Comment)

The Mine Plan has been revised to state that sedimentation impoundments will be required. Designs for sedimentation impoundments required in the first five years of operations are now provided in Addendum MP-2. Therefore, the reference to sedimentation impoundments in the Reclamation Plan has been left in place.

Comment MK 119 – Round 3

Response accepted.

Comment MK 127– Round 3 (New Comment)

RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this

round. Please include a statement in the text of Section RP.10 that there is some minor disturbance proposed within the AVF extent. Please also discuss in the text of Section RP.10 whether this disturbance would affect the essential hydrological functions of the AVF. (MDK)

Response MK 127 – Round 3 (New Comment)

Minor disturbance is planned within the Big Horn Mine AVF extent in Section 21of Township 57 North, Range 84 West. The disturbance should not affect the essential hydrologic functions of the AVF on the Tongue River as the disturbed area is minimal in size and should not preclude the conveyance of flow. AVF areas disturbed will be replaced to mimic premine conditions. Discussion of the reclamation of the disturbed AVF areas has been added to the second paragraph of Section RP.10.

Comment MuK 91 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 91. Section 8.3, page RP-38 states, "The estimated Postmine Potentiometric surfaces for the reclaimed aquifer for the Masters and Carney Seams are presented respectively in Exhibit RP.8.3 and Exhibit RP.8-4. Please provide a summary comparing and contrasting the premine potentiometric surfaces vs. post mine potentiometric surfaces. This comparison should also consider any changes in the hydraulic properties (hydraulic conductivity, storativity, recharge capacity) of the premine aquifers vs. post mine aquifers. (MK)

Response MuK 91 – Round 1

Section RP.8.5.3 has been revised to include discussion regarding the comparison of premine and postmine potentiometric surfaces.

Comment MuK 91 – Round 2

No comment received.

Response MuK 91 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 92 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 92. Please discuss any changes in the interaction between the surface water and groundwater systems from the premining through the postmining phases of the operation. (MK)

Response MuK 92 – Round 1

The response to Comment MuK 84 describes interaction between the surface water and groundwater systems from the premining through the postmining phases of operation. In general the changes between the surface water systems and the groundwater systems are expected to be minimal. For a short time during mining it is

anticipated that there will be a small (less than 6%) increase in the amount of water that recharges the coal seams from the Tongue River. Once the water levels in the coals recover, no further impacts are expected.

Comment MuK 92 – Round 2

No comment received.

Response MuK 92 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 93 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 93. Please discuss the intersection of the postmining topographic and potentiometric surfaces and their effects on the location and size of groundwater-fed water bodies. (MK)

Response MuK 93 – Round 1

Revised Section RP.8.5.3 as requested.

Comment MuK 93 – Round 2

No comment received.

Response MuK 93 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 94 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 94. Section 8.5.3, page RP-46 states, "These water quality changes can be qualitatively predicted from the overburden mineralogy and projected post mine hydrology." Please expand this discussion on projected groundwater quality. Provide a discussion on the estimated/ projected post mining groundwater quality. A detailed description of potential changes in water quality from flow through backfill/mined out areas should be included. Any potential changes to water quality in adjacent aquifers should be discussed with respect to the potential for offsite material damage. (MK)

Response MuK 94 – Round 1

Revised Section RP.8.5.3 text as requested.

Comment MuK 94 – Round 2

No comment received.

Response MuK 94 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 95 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 95. Please provide a discussion on any anticipated water use during the reclamation period. (MK)

Response MuK 95 – Round 1

As discussed in Addendum MP-3, the only anticipated groundwater uses during the reclamation period are at existing water supply wells. Section RP.8.5.3 has been revised to include additional discussion.

Comment MuK 95 – Round 2

No comment received.

Response MuK 95 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 96 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 96. Please address (or reference) any expected post-reclamation subsidence effects on the hydrologic system (both quantity and quality) and the plan to minimize these effects. (MK)

Response MuK 96 – Round 1

Section RP.8.5.3 has been revised to include discussion of expected postmine subsidence effects on the hydrologic system.

Comment MuK 96 – Round 2

No comment received.

Response MuK 96 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 7 – Round 1

Reclamation Plan, Page RP-13. Section RP.6.2.6. In the last sentence please add that substitutions to the seed mix will be made only with WDEQ approval.

Response SP 7 – Round 1

Revised text in Section RP.6.2.6 as requested, the statement will now read "In the event that seed for primary species is not available, alternatives will be considered

which match the life form and morphology of the primary choice only with WDEQ approval."

Comment SP 7 – Round 2

No comment received.

Response SP 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 7 – Round 3

The response is satisfactory. A commitment to notify the DWEQ for seed mix substitutions has been added.

Comment SP 8 – Round 1

Reclamation Plan, Page RP-16. Section RP.6.4.1. To demonstrate that all of the unaffected acres of each vegetation community are sufficient for an extended reference area please create a table with total acres and affected acres and reference this table in this section.

Response SP 8 – Round 1

Table RP.6-6 has been created to display the number of extended reference acres for the respective vegetation communities. The text in Section RP.6.4.1 has been revised to include a reference to the newly created table.

Comment SP 8 – Round 2

No comment received.

Response SP 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 8 – Round 3

Table RP6-6. This table should use the acreage within the permit boundary since the mine has control over management of the land in the permit. Please revise the first column of this table from Brook Mine Study Area to Brook Mine Permit Area and use the acreages from Table D8.2-1. For the second column please title it Disturbed Acreage. When the subtraction for the final column occurs there will be very little acreage for the Agricultural Land but historic or county production numbers can be used.

Response SP 8 – Round 3

Table RP.6-6 has been revised with the permit area acreages from Table D8.2-1 in the first column and the second column has been renamed from Postmining Disturbed Areas to Disturbed Acreage.

Comment SP 9 – Round 1

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please add to the Ch. 4 reference in the first sentence on this page that the Handbook of Approved Sampling and Statistical Methods for Evaluation of Revegetation Success on Wyoming Coal Mines.

Response SP 9 – Round 1

Revised Section RP.6.4.1 as requested.

Comment SP 9 – Round 2

No comment received.

Response SP 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 9 – Round 3

The response is satisfactory. A reference to the Handbook of Approved Sampling and Statistical Methods for Evaluation of Revegetation Success on Wyoming Coal Mines has been added.

Comment SP 10 – Round 1

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please remove the first sentence in the third paragraph. It appears in conflict with the next sentence which cites Ch. 4.Sec. 2(d)(ii)(B).

Response SP 10 – Round 1

Removed sentence as requested in Section RP.6.4.1.

Comment SP 10 – Round 2

No comment received.

Response SP 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 10 – Round 3

The response is satisfactory. The conflicting citation has been removed.

Comment SP 11 – Round 1

Reclamation Plan, Page RP-19. Section RP.6.4.5.1. Please add a third sentence to the first paragraph to Pastureland land use with a full shrub density greater than 1 shrub/m2 is also eligible.

Response SP 11 – Round 1

Sentence including pastureland land use as eligible added to Section RP.6.4.5.1 as requested.

Comment SP 11 – Round 2

No comment received.

Response SP 11 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 11 – Round 3

The response is satisfactory. Pastureland with greater than 1 shrub/m2 has been corrected to be eligible.

Comment SP 12 – Round 1

Reclamation Plan, Page RP-24. Please revise the sentence after the ● Shrub density bullet to "Additionally, a species list will be prepared" and delete the remainder of the sentence.

Response SP 12 – Round 1

Revised text as requested.

Comment SP 12 – Round 2

No comment received.

Response SP 12 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 12 – Round 3

The response is satisfactory. The sentence has been revised.

Comment SP 13 – Round 1

Reclamation Plan, Page RP-25. Section RP.6.7.3. Under Sampling Frequency in Guideline 14 the third sample may be included as part of your revegetation success (bond release) sampling which can begin in year seven. You may add more flexibility

to your sampling interval such as beginning year 3 or 4, with the second sampling in year 5, 6 or 7 and then the third may be year 7 – 13 and may be used for revegetation success.

Response SP 13 – Round 1

Revised text per recommendations.

Comment SP 13 – Round 2

No comment received.

Response SP 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 13 – Round 3

This is confusing. Please use the following language for the section. Sampling will begin in year 3 or 4 after seeding. The second sampling will occur in year 6 or 7 after seeding and the third sampling which may be used for final revegetation success will occur by year 13 or 14 after seeding. In the event the bond period for specific monitoring areas exceeds ten years, additional sampling will occur every five years after the third sample until final bond release.

Response SP 13 – Round 3

RAMACO acknowledges that the text may be confusing. Reclamation Plan text will remain as is.

Comment SP 14 – Round 1

Reclamation Plan, Page RP-29. Section RP.7.2. There is a reference to RP.8 in this section. Please correct the reference if it is not correct.

Response SP 14 – Round 1

Revised text to reference Section RP.6 for seed mixtures and revegetation operations.

Comment SP 14 – Round 2

No comment received.

Response SP 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 14 – Round 3

The response is satisfactory. The reference has been corrected.

Comment SP 15 – Round 1

Reclamation Plan, Table RP6.1. Could you please add a footnote listing the disturbances that are included in the 87.3 acres of Disturbance and what the disturbances will be postmining in the 56.1 acres.

Response SP 15 – Round 1

Added footnote describing disturbance for premining and postmining to Table RP.6-1 as requested.

Comment SP 15 – Round 2

No comment received.

Response SP 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 15 – Round 3

The response is satisfactory. The types of disturbance have been listed.

Comment SP 16 – Round 1

Reclamation Plan, Exhibit RP.2-1. Postmining the landuse will be Grazingland and Fish and Wildlife Habitat (937.7 acres) and Cropland (3.7 acres) with 56.1 acres of disturbance, 4.9 acres of water and 11.6 acres of wetland. These landuses will match the landuses on Exhibit D1.1-1. With just minor acreage changes shown in Table RP.6-1. Since the railroad and major roads are identified and Taylor Quarry is going to be reclaimed to Grazingland and Fish and Wildlife Habitat, the Industrial commercial stippling is not needed on these areas.

Response SP 16 – Round 1

Revised exhibit as requested.

Comment SP 16 – Round 2

No comment received.

Response SP 16 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 16 – Round 3

The response is satisfactory. Exhibit RP.2-1 has been revised to Grazingland for the reclamation of the Taylor Quarry.

Comment SP 17– Round 3 (New Comment)

Please correct tables or text that list the new affected area. This acreage should match the acreage listed on your Form 1.

Response SP 17 – Round 3 (New Comment)

Tables RP.6-3 has been revised to include a note stating the affected area acreage outside the disturbance boundary has been excluded from shrub density calculations because this acreage will be undisturbed during mining operations except for potential subsidence. No other tables have been revised in response to this comment. Form 1 has been updated with the revised affected area acreage in Adjudication.

Comment SP 18– Round 3 (New Comment)

The shrub density standard is based on the affected acreage which is listed on your Form 1. Please make any needed changes to your shrub density tables and maps.

Response SP 18 – Round 3 (New Comment)

Tables RP.6-3 has been revised to include a note stating the affected area acreage outside the disturbance boundary has been excluded from the shrub density calculations because this acreage will be undisturbed during mining operations except for potential subsidence. Form 1 has been updated with the revised affected area acreage in Adjudication.

Other Comments

Comment MK 27 – Round 1

Items Requested in Electronic Format for Preparation of CHIA, 1. Please provide a CAD or ArcGIS shapefile that contains the proposed permit boundary for the Brook Mine. This file will be used to prepare maps in the CHIA. This file can be emailed to: matthew.kunze@wyo.gov. (MDK)

Response MK 27 – Round 1

See response to comment MK 28.

Comment MK 27 – Round 2

Response to the comment is pending. Review of the response to this comment will be completed when the information is received. (MDK)

Response MK 27 – Round 2

The permit boundary in CAD format was provided as an attachment in an e-mail dated September 1, 2015.

Comment MK 27 – Round 3

Response accepted.

Comment MK 28 – Round 1

Items Requested in Electronic Format for Preparation of CHIA, 2. Please provide the baseline surface and groundwater data collected to support baseline characterization for the permit application. All data can be submitted on Excel templates (Attachments) found on the LQD website for the Coal Annual Report Format (CARF): http://deq.wyoming.gov/lqd/coal/resources/annual-report-3/.

• Please provide all surface water flow and water quality data for the following surface water stations: SM578415-SW-1, SM578409-SW-1, SM578418-SW-1, and SM578512-SW-1.

• Please provide all groundwater level and water quality data for all Brook Mine monitoring wells shown in Table D6.2-1.

Response MK 28 – Round 1

The electronic data requested is being compiled in the requested format and will be provided when it is completed.

Comment MK 28 – Round 2

Response to the comment is pending. Review of the response to this comment will be completed when the information is received. (MDK)

Response MK 28 – Round 2

The electronic data in CARF format was provided as an attachment in an e-mail dated September 1, 2015.

Comment MK 28 – Round 3

Response accepted.

Comment MuK 97 – Round 2 (New Comment)

In the next submittal, please consider providing a text tracking mechanism that will highlight the changes that are made in response to the comments. Typically, it can be a bolded font for all the text that is revised. This will help the reviewer to review the appropriate revised text. Without this bold font or some distinct highlight for the revised text, the reviewer has to compare against the initial submittal to get a handle on the changes that were made in response to the LQD comments.

Response MuK 97 – Round 2 (New Comment)

RAMACO will coordinate with WDEQ to facilitate review in anyway once WDEQ has determined the method that is most suitable (as per the meeting on September 1, 2015). In the meantime, RAMACO has attempted to make it as clear as possible in comment responses what the location of textual changes has been. Additionally, please refer to the Change Index for locations of replaced or added text, tables, and figures. Also, any page with new changes will be updated with the submittal month and year in the footer. Pages in the permit without changes will maintain previous dates.

Comment MuK 97 – Round 3

Response accepted.

INDEX SHEET FOR MINE PERMIT AMENDMENTS OR REVISIONS

Date December 8, 2015
TFN 6 2/025

MINE COMPANY NAME: RAMACO, LLC.

MINE NAME: Brook Mine
PERMIT NO. TFN 6 2/025

Statement: I, Jeff Barron, an authorized representative of RAMACO, LLC. declared that only the items listed on this and all consecutively numbered Index Sheets are intended as revisions to the current permit document. In the event that other changes inadvertently occurred due to this revision, those unintentional alterations will not be considered approved. Please initial and date.

NOTES: 1) Include all revision or change elements and a brief description of, or reason for, each revision element.
2) **This Change Index is for only those changes made during Round 3 Comment Response.**

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume I	Adjudication Form 1-1 to Adjudication Form 1-4 (Form 1 tab)	Adjudication Form 1-1 to Adjudication Form 1-4 (Form 1 tab)	Update acreage to be affected.
Volume I		Adjudication Insurance-5(Insurance tab)	Add updated certificate of liability insurance.
Volume IV	D5-12 (Appendix D5 Text tab)	D5-12 (Appendix D5 Text tab)	Add “groundwater flows” to the middle of the third sentence in Section D5.3.3.4.
Volume IV	Addendum D5-4 Exhibit 1 (Addendum D5-4 tab)	Addendum D5-4 Exhibit 1 (Addendum D5-4 tab)	Provide Exhibit 1 Overburden Isopach Overlying the Carney Coal Seam.
Volume V	D6-2 (Appendix D6 Text tab)	D6-2 (Appendix D6 Text tab)	Revise discussion of ephemeral streams in the fifth sentence of the third paragraph of Section D6.1.2. Add sentence in the center of the third paragraph of Section D6.1.2 regarding Slater Creek as an intermittent stream. Add sentence in the center of the third paragraph of Section D6.1.2 regarding the intermittent stream definition.
Volume V	D6-10 to D6-11 (Appendix D6 Text tab)	D6-10 to D6-11 (Appendix D6 Text tab)	Add “mostly” to the first sentence in the first paragraph of Section D6.1.5.2. Revise the third paragraph of Section D6.1.5.2 to describe Slater Creek as an intermittent stream. Revise the fifth sentence in the second paragraph of Section D6.1.5.3. editing “ephemeral” to “low flow”.
Volume V	D6-17 to D6-19 (Appendix D6 Text tab)	D6-17 to D6-19 (Appendix D6 Text tab)	Discussion of the potentiometric head differences between alluvium and Carney coal as it relates to CBNG dewatering has been added to the end of the second paragraph in Section D6.2.2.2
Volume V	D6-T17 (Appendix D6 Tables tab)	D6-T17 (Appendix D6 Tables tab)	Revise Table D6.1-11 monitoring location northings and eastings for locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1.
Volume V	Exhibit D6.1-2 (Appendix D6 Exhibits tab)	Exhibit D6.1-2 (Appendix D6 Exhibits tab)	Revise surface water monitoring locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1.
Volume VI	D7-3 (Appendix D7 Text tab)	D7-3(Appendix D7 Text tab)	Revise reference in the fourth sentence in the fourth paragraph of Section D7.2 from (Schellinger, 2014) to (WDEQ-LQD, 2014b).

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume VI	D7-32 to D7-34 (Appendix D7 Text tab)	D7-32 to D7-34 (Appendix D7 Text tab)	Revise reference section by removing Schellinger, 2014 reference and adding Wyoming Department of Environmental Quality–Land Quality Division (WDEQ-LQD), 2014b reference.
Volume VI	Figure D7.1-1 (Appendix D7 Figures tab)	Figure D7.1-1 (Appendix D7 Figures tab)	Update the location of trench TR-1 and associated highwall panel.
Volume VII	Exhibit D8.2-1(Appendix D8 Exhibits tab)	Exhibit D8.2-1(Appendix D8 Exhibits tab)	Revise study area boundary.
Volume VII	Addendum D8-1-4 (Addendum D8-1 tab)	Addendum D8-1-4 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage throughout Section D8-1.1.
Volume VII	Addendum D8-1-14 to Addendum D8-1-16 (Addendum D8-1 tab)	Addendum D8-1-14 to Addendum D8-1-16 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Sections D8-1.3.1, D8-1.3.2 and D8-1.3.3.
Volume VII	Addendum D8-1-18 (Addendum D8-1 tab)	Addendum D8-1-18 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Section D8-1.3.4.
Volume VII	Addendum D8-1-20 to Addendum D8-1-21 (Addendum D8-1 tab)	Addendum D8-1-20 to Addendum D8-1-21 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Sections D8-1.3.5 and D8-1.3.6.
Volume VII	Addendum D8-1-23 to Addendum D8-1-24 (Addendum D8-1 tab)	Addendum D8-1-23 to Addendum D8-1-24 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Sections D8-1.3.7 and D8-1.3.8.
Volume VII	Addendum D8-1-26 (Addendum D8-1 tab)	Addendum D8-1-26 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Section D8-1.3.9.
Volume VII	Addendum D8-1-28 (Addendum D8-1 tab)	Addendum D8-1-28 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Section D8-1.3.10.
Volume VII	Addendum D8-1-30 to Addendum D8-1-31 (Addendum D8-1 tab)	Addendum D8-1-30 to Addendum D8-1-31 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Sections D8-1.3.11 and D8-1.3.12.
Volume VII	Addendum D8-1-35 to Addendum D8-1-36 (Addendum D8-1 tab)	Addendum D8-1-35 to Addendum D8-1-36 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage and vegetation community acreage in Section D8-1.8.
Volume VII	Addendum D8-1-41 (Addendum D8-1 tab)	Addendum D8-1-41 (Addendum D8-1 tab)	Revise vegetation community acreages for Brook Mine Study Area in Table D8-2.
Volume VII	Addendum D8 Map 1 (Addendum D8-1 tab)	Addendum D8 Map 1 (Addendum D8-1 tab)	Revise study area boundary.
Volume X	D11-i (Appendix D11 TOC tab)	D11-i (Appendix D11 TOC tab)	Update TOC.
Volume X	D11-4 (Appendix D11 Text tab)	D11-4 (Appendix D11 Text tab)	Revise the last sentence in the second paragraph of Section D11.3 to describe Slater Creek as an intermittent stream.

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume X	D11-11 to D11-14 (Appendix D11 Text tab)	D11-11 to D11-14 (Appendix D11 Text tab)	Add discussion of Conable Reservoir and Conable Ditch and Lateral in the fourth paragraph of Section D11.5. Add discussion of the planned minor AVF disturbance to the first paragraph in Section D11.7 and add references to Mine Plan Section MP.25 and Reclamation Plan Section RP.10 for further discussion of the AVF disturbance.
Volume XI	MP-ii (Mine Plan TOC tab)	MP-ii (Mine Plan TOC tab)	Update TOC.
Volume XI	MP-5 (Mine Plan Text tab)	MP-5 (Mine Plan Text tab)	Revise description of disturbance and affected area boundaries in the second paragraph of Section MP.1.3.
Volume XI	MP-14 (Mine Plan Text tab)	MP-14 (Mine Plan Text tab)	Add sentence regarding depth staking to end of bullet item 1 in the first paragraph of Section MP.4.2.1.
Volume XI	MP-18 (Mine Plan Text tab)	MP-18 (Mine Plan Text tab)	Add commitment to conduct overburden sampling and analysis to the end of Section MP.4.3. Add commitment to prevent overburden materials from shifting on native topsoil areas during removal operations at the end of Section MP.4.3.1.
Volume XI	MP-24 to MP-26 (Mine Plan Text tab)	MP-24 to MP-26 (Mine Plan Text tab)	Add sentence that mine trenches serve as sediment control as the sixth sentence of the first paragraph of Section MP.5.1. Revise the seventh sentence of the first paragraph of Section MP.5.1 to include discussion of mine trench locations. Add discussion of the wastewater impoundment to the end of Section MP.5.2.
Volume XI	MP-43 (Mine Plan Text tab)	MP-43 (Mine Plan Text tab)	Add fifth sentence from the end in fifth paragraph of Section MP.6.1 that a 100 foot buffer boundary of Slater Creek will be marked in the field prior to mining related disturbance.
Volume XI	MP-48 to MP-49 (Mine Plan Text tab)	MP-48 to MP-49 (Mine Plan Text tab)	The second paragraph of Section MP.7.1has been revised to clarify the commitment to obtain direct discharge measurements to evaluate the rating curves.
Volume XI	MP-76 to MP-77 (Mine Plan Text tab)	MP-76 to MP-77 (Mine Plan Text tab)	Revise the discussion of disturbed AVFs in the second paragraph of Section MP.25. Add commitment to install monitoring wells prior to commencing mining related disturbance in the center of the fifth paragraph of Section MP.25.
Volume XI	MP-T1 (Mine Plan Tables tab)	MP-T1 (Mine Plan Tables tab)	Update Table MP.1-1 trench mining and facilities disturbance acreage for trench TR-1 revision.
Volume XI	MP-T5 (Mine Plan Tables tab)	MP-T5 (Mine Plan Tables tab)	Update Table MP.4-1 with revised topsoil volumes and stripping areas for trench TR-1 revision.
Volume XI	MP-T6 (Mine Plan Tables tab)	MP-T6 (Mine Plan Tables tab)	Update Table MP.4-2 with revised topsoil volumes for trench TR-1 revision.
Volume XI	MP-T7 (Mine Plan Tables tab)	MP-T7 (Mine Plan Tables tab)	Update Table MP.4-3 with revised capacity for pile TS-1b for trench TR-1 revision.
Volume XI	MP-T16 (Mine Plan Tables tab)	MP-T16 (Mine Plan Tables tab)	Revise Table MP.7-1 monitoring location northings and eastings for locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1.

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume XI	Exhibit MP.1-1 (Mine Plan Exhibits tab)	Exhibit MP.1-1 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and the footprint of overburden pile OB-3.
Volume XI	Exhibit MP.3-1 (Mine Plan Exhibits tab)	Exhibit MP.3-1 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and its associated highwall mining panels.
Volume XI	Exhibit MP.4-1 (Mine Plan Exhibits tab)	Exhibit MP.4-1 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and its associated highwall mining panels.
Volume XI	Exhibit MP.4-2 (Mine Plan Exhibits tab)	Exhibit MP.4-2 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and the footprint of overburden pile OB-3.
Volume XI	Exhibit MP.4-3 (Mine Plan Exhibits tab)	Exhibit MP.4-3 (Mine Plan Exhibits tab)	Revise the location of topsoil pile TS-1B and overburden pile OB-3.
Volume XI	Exhibit MP.4-4 (Mine Plan Exhibits tab)	Exhibit MP.4-4 (Mine Plan Exhibits tab)	Revise the location of trench TR-1.
Volume XI	Exhibit MP.4-5 (Mine Plan Exhibits tab)	Exhibit MP.4-5 (Mine Plan Exhibits tab)	Revise the location of trench TR-1.
Volume XI	Exhibit MP.5-1 (Mine Plan Exhibits tab)	Exhibit MP.5-1 (Mine Plan Exhibits tab)	Add 100 foot intermittent stream buffer boundary to Slater Creek within the permit area. Revise the location of trench TR-1. Revise the location of topsoil pile TS-1B and overburden pile OB-3. Revise sediment pond SP-4 and add sediment pond SP-8.
Volume XI	Exhibit MP.7-1 (Mine Plan Exhibits tab)	Exhibit MP.7-1 (Mine Plan Exhibits tab)	Revise surface water monitoring locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1.
Volume XI	Exhibit MP.15-1 (Mine Plan Exhibits tab)	Exhibit MP.15-1 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and its associated highwall mining panels.
Volume XI	Exhibit MP.15-2 (Mine Plan Exhibits tab)	Exhibit MP.15-2 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and its associated highwall mining panels.
Volume XI	Addendum MP-2-2 (Addendum MP-2 tab)	Addendum MP-2-2 (Addendum MP-2 tab)	Revise Addendum MP-2 Table of Contents to include additional sediment pond design SP-8.
Volume XI	Addendum MP-2 Exhibit 2 (Addendum MP-2 tab)	Addendum MP-2 Exhibit 2 (Addendum MP-2 tab)	Switch locations of overburden stockpile OB-3 and topsoil stockpile TS-1B.
Volume XI	Addendum MP-2 Exhibit 3 Sheets 1 and 2 (Addendum MP-2 tab)	Addendum MP-2 Exhibit 3 Sheets 1 and 2 (Addendum MP-2 tab)	Switch locations of overburden stockpile OB-3 and topsoil stockpile TS-1B.
Volume XI	Addendum MP-2 Exhibit 4 Sheets 1 and 2 (Addendum MP-2 tab)	Addendum MP-2 Exhibit 4 Sheets 1 and 2 (Addendum MP-2 tab)	Switch locations of overburden stockpile OB-3 and topsoil stockpile TS-1B.
Volume XI	Addendum MP-2 Exhibit 5 (Addendum MP-2 tab)	Addendum MP-2 Exhibit 5 (Addendum MP-2 tab)	Switch locations of overburden stockpile OB-3 and topsoil stockpile TS-1B.

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume XI		Addendum MP-2 Exhibit 13 Sheets 1 and 2 (Addendum MP-2 tab)	Add sediment pond design for SP-8.
Volume XI	Addendum MP-3-4 to Addendum MP-3-5 (Addendum MP-3 tab)	Addendum MP-3-4 to Addendum MP-3-5 (Addendum MP-3 tab)	Revise maximum modeled drawdown from 23.1 feet to 25.8 feet in second sentence of Impacts Section. Revise maximum loss of available head from 23.1 feet to 25.8 feet in bullet item b. in Conclusion Section.
Volume XI	Addendum MP-3-30 (Addendum MP-3 tab)	Addendum MP-3-30 (Addendum MP-3 tab)	Revise Groundwater Vistas Version from 6 to 6.8 Build 1 in the first sentence of Section 3.1.
Volume XI	Addendum MP-3-49 to Addendum MP-3-50 (Addendum MP-3 tab)	Addendum MP-3-49 to Addendum MP-3-50 (Addendum MP-3 tab)	Revise Table 4.7-1 with updated values. Revise text throughout the third paragraph of Section 4.7.2.
Volume XI	Addendum MP-3-54 to Addendum MP-3-69 (Addendum MP-3 tab)	Addendum MP-3-54 to Addendum MP-3-69 (Addendum MP-3 tab)	Revise Figure 4.7-4 with updated values. Revise Table 4.8-1, Table 4.8-2, Table 4.8-3 and Table 4.8-4 with updated values. Revise last sentence in the first paragraph of Section 4.8.4 editing “relatively” to “not a highly”. Add discussion of trench TR-1 movement to center of the first paragraph in Section 4.9. Revise Figures 4.9-1, 4.9-2, 4.9-3, 4.9-4, 4.9-5, 4.9-6, 4.9-7, 4.9-8, 4.9-9, 4.9-10 with updated trench TR-1 location. Revise values in Table 4.9-1.
Volume XI	Addendum MP-3-71 to Addendum MP-3-72 (Addendum MP-3 tab)	Addendum MP-3-71 to Addendum MP-3-72 (Addendum MP-3 tab)	Revise Figure 4.9-11with updated trench TR-1 location. Revise the fifth paragraph in Section 4.9. Revise Table 4.9-2 with updated values.
Volume XI	Addendum MP-3-77 (Addendum MP-3 tab)	Addendum MP-3-77 (Addendum MP-3 tab)	Revise Table 4.10-1 with updated values and add note regarding Sx and Tx designations.
Volume XI	Addendum MP-3-101 to Addendum MP-3-112 (Addendum MP-3 tab)	Addendum MP-3-101 to Addendum MP-3-112 (Addendum MP-3 tab)	Revise Appendix B figures with updated trench TR-1 location.
Volume XI	Exhibit MP-9-1 (Addendum MP-9 tab)	Exhibit MP-9-1 (Addendum MP-9 tab)	Revise the locations of trench TR-1 and the footprint of overburden pile OB-3.
Volume XII	RP-9 (Rec Plan Text tab)	RP-9 (Rec Plan Text tab)	Revise the end of the second paragraph in Section RP.5.6 to discuss sediment control procedures being used until Phase II Bond Release Verification has been approved.
Volume XII	RP-45 (Rec Plan Text tab)	RP-45 (Rec Plan Text tab)	Revise first paragraph of Section RP.8.5.2 to describe Slater Creek as an intermittent stream.
Volume XII	RP-60 to RP-61 (Rec Plan Text tab)	RP-60 to RP-61 (Rec Plan Text tab)	Add discussion of reclamation and hydrologic functions of disturbed AVFs throughout Section RP.10. Add commitment to install alluvial monitoring wells prior to commencing mining related disturbance in Section RP.10.
Volume XII	RP-T5 (Rec Plan Tables tab)	RP-T5 (Rec Plan Tables tab)	Revise Table RP.6-3 by adding a note regarding the affected area acreage excluded from the shrub density calculations due to the area not being disturbed by direct mining operations and only potentially affected by potential subsidence.

INDEX SHEET FOR MINE PERMIT AMENDMENTS OR REVISIONS

Date December 8, 2015
TFN 6 2/025

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume XII	RP-T8 (Rec Plan Tables tab)	RP-T8 (Rec Plan Tables tab)	Revise Table RP.6-6 to change vegetation community acreages from Brook Mine Study Area to Brook Mine Permit Area acreages. Revise heading of Postmining Disturbed Areas to Disturbed Acreage.
Volume XII	Exhibit RP.5-1 (Rec Plan Exhibits tab)	Exhibit RP.5-1 (Rec Plan Exhibits tab)	Revise the location of topsoil pile TS-1B.
Volume XII	Exhibit RP.8-5 (Rec Plan Exhibits tab)	Exhibit RP.8-5 (Rec Plan Exhibits tab)	Revise surface water monitoring locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1

From: BJ Kristiansen
To: matthew.kunze@wyo.gov
Subject: FW: Brook Mine Round 3 responses, TFN 6 2/025
Date: Friday, December 18, 2015 9:15:18 AM
Attachments: Compiled Round 3 Comment Responses.docx
Brook_Mine_Change_Index_December_2015.docx
image001.jpg

Here Matt…..

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Friday, December 18, 2015 8:13 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: Brook Mine Round 3 responses, TFN 6 2/025

BJ,

Find attached the compiled responses and index of change

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Friday, December 18, 2015 8:12 AM
To: Jeff Barron
Subject: Brook Mine Round 3 responses, TFN 6 2/025

Jeff,

I can't find the response sheets in the electronic materials you left here the other day. Could I get an electronic copy of the response sheets so I can do comparisons without having to visit the library every time I need to work with the files?

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Contents

Adjudication 2
Appendix D1 5
Appendix D2 7
Appendix D3 7
Appendix D4 8
Appendix D5 9
Appendix D6 27
Appendix D7 60
Appendix D8 64
Appendix D9 69
Appendix D10 70
Appendix D11 72
Mine Plan 89
Reclamation Plan 203
Other Comments 235

Adjudication

Comment AG 1 – Round 1

Please also provide copies of the complaint and the answer. If there are any motions that the court has ruled on limiting or deciding any of the claims or factual or legal questions originally at issue in the case, please also provide copies of the orders, the motions, the responses to the motions, and any supporting memoranda.

Response AG 1 – Round 1

The Applicant's position with regard to any surface interests that may be claimed by Padlock Ranch Company and/or Big Horn Coal Company is that the Applicant alone owns the sole dominant present property right to use these surface lands for the coal mining operation described in the application, as that application has been submitted and supplemented. Applicant's sole dominant surface ownership and use interest in the relevant lands derives directly from the 1954 Deed (Attachment B) and its express reservation language. Pursuant to the controlling Wyoming Supreme Court authority set out in *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986) (Attachment C), when the Applicant already owns the dominant surface use rights for coal mining on the property, then the Applicant consents to its own use pursuant to its application by submitting the application and no other surface consents can or should be required under W.S. § 35-11-406(b)(xi). As the Land Quality Division is aware, to the extent that Padlock Ranch Company incorrectly claims some surface rights on any lands described in the 1954 Deed, it necessarily could only attempt to do so fully subject to the Applicant's sole dominant surface rights to mine coal. Under the WYOMO Fuels, Inc. decision, no consent from Padlock can be required. To the extent that Big Horn Coal incorrectly claims some surface use right in this area at this time, the Applicant is proceeding with quiet title litigation (Fourth Judicial District Court, Sheridan County, Wyoming Civil No. CV 2014-372) against Big Horn Coal on this issue and has asserted its sole dominant reserved surface right to use the surface described in the 1954 Deed to mine coal there without any consent from Big Horn Coal pursuant to the WYMO Fuels, Inc. case decision. Accurate copies of the Applicant's pending summary judgment motion arguments on this issue are enclosed with this response (attachment D and E). The Applicant can and will supplement these pleadings with further documentation that is described in the pleadings upon request.

Comment AG 1 – Round 2

Please provide copies of the following documents related to the state district court litigation between the Applicant/Ramaco and Big Horn Coal Company:

- The complaint and answer filed in the case (if either has been amended, only the most recent amended version needs to be provided).

- For the Applicant's summary judgment motion: Big Horn Coal's response to the motion.
- For Big Horn Coal's motion for summary judgment: the memo supporting that motion, the Applicant's response to the motion, and Big Horn Coal's reply memorandum.
- The "Section 5" of the "May 6, 1983, Release Agreement" that the Applicant mentioned in its reply in support of its summary judgment motion.
- When it is available, the district court's order deciding the Applicant's and Big Horn Coal's summary judgment motions.

Response AG 1 – Round 2

The materials requested in this comment were supplied to the Attorney General on August 20, 2015 after the Round 2 comments had been released. It is assumed if any further comment is required, it will be received in Round 3.

Comment AG 2 – Round 1

Therefore, the Division requests the Applicant to provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch Company and Big Horn Coal Company are or are not "residential or agricultural landowners" under the statutory definition in W.S. § 35-11-406(b)(xi).

Response AG 2 – Round 1

Please see response AG 1.

Comment AG 2 – Round 2

Please also provide sufficient information and supporting documents for the Division to determine whether Padlock Ranch or Big Horn Coal qualify as a "resident or agricultural landowner," as defined in W.S. § 35-11-406(b)(xi). The statutory requirements for a permit application differ depending on whether that status exists, and the Division must determine which set of requirements (W.S. § 35-11-406(b)(xi) or -406(b)(xii)) may apply to this Application.

Response AG 2 – Round 2

The materials requested in this comment were supplied to the Attorney General on August 20, 2015 after the Round 2 comments had been released. It is assumed if any further comment is required, it will be received in Round 3.

Comment AG 3 – Round 2 (New Comment)

Would the 1983 release agreement apply to the surface rights that originate with the1954 Deed and are currently owned by Padlock Ranch? Did Padlock Ranch obtain its rights at issue before or after the 1980 release agreement?

Response AG 3 – Round 2 (New Comment)

No. The 1983 release agreement does not affect any of the rights reserved in the 1954 Deed. The 1954 Deed controls the surface use mining rights of Ramaco relative to both Big Horn Coal and Padlock Ranch. Even if the release agreement had an effect as to Big Horn, Padlock Ranch is not a party to the release agreement and as a non-party has no rights under that agreement. Ramaco has found no documents that might show Padlock Ranch acquired any kind of interest or rights under the 1983 release agreement.

Instead, Ramaco has found documents that show Padlock Ranch acquired certain lands from Big Horn Coal in 1965, almost 20 years **before** the release agreement. Padlock then sold some of the land back to Big Horn Coal and vice versa. But none of the documents showing these transfers mention the 1983 release agreement.

Comment AG 4 – Round 2 (New Comment)

If one assumes that Big Horn's arguments in the litigation are correct that the 1983 release agreement granted Big Horn rights greater than those under the 1954 Deed, would Big Horn's arguments and the rights it argues that it obtained through the release agreement also apply to any of Padlock Ranch's lands?

Response AG 4 – Round 2 (New Comment)

No. As discussed in response to the previous question, Padlock Ranch does not have any rights under the release agreement. Likewise, Ramaco could find no documents showing that Padlock Ranch ever acquired any rights in the 1983 release agreement.

Comment AG 5 – Round 2 (New Comment)

Are there any contractual documents or property records related to Padlock Ranch's lands that arguably may have altered Padlock Ranch's rights under the 1954 Deed? If so, please provide copies of those documents and explain the nature of the documents and how they may have affected Padlock Ranch's rights.

Response AG 5 – Round 2 (New Comment)

No. Ramaco has found several deeds purporting to convey land from Big Horn Coal to Padlock Ranch's predecessor. These deeds, however, do not alter or try to alter any rights under the 1954 Deed.

Comment BJ 68 – Round 3 (New Comment)

The Certificate of Liability Insurance appears to have expired on October 14, 2015. Please generate a new Certificate of Liability Insurance to cover the present period.

Response BJ 68 – Round 3 (New Comment)

A new Certificate of Liability Insurance covering the present period has been provided in this response package.

Comment DM 1 – Round 1

Adjudication – Appendix B2 – Groundwater Rights – There is a groundwater well that is missing in this volume. The listing is as follows:

Barbula #2

Permit No. 85631W

Location: SW NW Section 21, T57N R84W

Please add this entry to the table and to any corresponding maps.

Response DM 1 – Round 1

Adjudication text page WR-12 has been updated to include Barbula # 2 (P85631W) as well as Adjudication Exhibits 5 & 8.

Comment DM 1 – Round 2

No comment received.

Response DM 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 120 – Round 3 (New Comment)

Adjudication-Form 1. The index change sheet states that the affected area boundary was updated on several Exhibits. Has the affected area acreage changed? If so a new Form 1 will need submitted to show the correct affected area acreage. (MDK)

Response MK 120 – Round 3 (New Comment)

A new Form 1 has been provided with the revised affected acreage in this response package.

Appendix D1

Comment BJ 1 – Round 1

Appendix D1, Land Use, Table D1. 3-1; It is unnecessary to list the Expired Permit category of gas well permits. Since these APDs have expired without completion there is no related activity to the site. Listing of a non-event is not required. This also

applies to the NO category since this indicates that the APD was refused, thus never became permitted through WOGCC.

Response BJ 1 – Round 1

Revised Table D1.3-1 as requested.

Comment BJ 1 – Round 2

No comment received.

Response BJ 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 1 – Round 1

Appendix D-1. Exhibit D1.1-1. The landuses defined in Chapter 1 should be used on this Exhibit. Not the entire Brook Mine Permit falls neatly into these definitions so the following comments provide guidance:

a) The railroad, primary roads, oil and gas wells, and the facilities for Taylor Quarry would be considered Industrial commercial and may be shown with the vertical line stippling. The rest of the vertical stippling should be removed.

b) The 4.5 acres of Agricultural lands would have the Land use of Cropland. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no changes are needed to the map for this land use.

c) The 12.8 acres of water might be listed under multiple landuses such as Grazingland, Fish and Wildlife habitat or Recreational. This small acreage will not show up well on this map but is listed in Tables D.8-2 and RP.6-1 so no change is needed to the map for this land use.

d) The 4,421.8 acres remaining should be shown as Grazingland and Fish and Wildlife habitat. The legend on the map should have Fish and Wildlife Habitat added to Past and Present Grazingland landuse. The stippled area on the map will stay the same.

e) No changes are needed to the areas identified as Recreational.

Response SP 1 – Round 1

Revised Exhibit D1.1-1 as requested.

Comment SP 1 – Round 2

No comment received.

Response SP 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 1 – Round 3

The response is satisfactory. Exhibit D1.1-1 has been revised to match the landuse definitions.

Comment SP 2 – Round 1

Appendix D-1. Text that refers to the areas mined as Industrial commercial should be revised to remove the mining. A reference to Section 1.6 on historic mining can be made in Section D1.3.1. Grazingland. The reclaimed mined lands are now being used as Grazingland. The difference between the mined and never been mined is defined as the vegetation community that is called Reclaimed. Section D1.6 discusses the historic mining of the area and the discussion on coal mining in Industrial commercial (D1.4.3) can be removed.

Response SP 2 – Round 1

Revised text as requested.

Comment SP 2 – Round 2

No comment received.

Response SP 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 2 – Round 3

The response is satisfactory. The text has been revised to identify the reclaimed land as Grazingland.

Appendix D2

Comment BJ 2 – Round 1

Appendix D2, History, There are no comments for this section of the application. The narrative is well written and comprehensive.

Response BJ 2 – Round 1

No response is necessary.

Appendix D3

No comments were received regarding Appendix D3.

Appendix D4

Comment BJ 3 – Round 1

Appendix D4, Climatology, General comment – Is there no data for climatology that is more recent than 1990? It exists, therefore needs to be represented. Please locate and include the most recent climatological data. Twenty year-old data bears little resemblance to Sheridan County climate today so characterization of the present climate with a 20 year gap is problematic. Please reevaluate the data in light of locating and use more recent information.

Response BJ 3 – Round 1

Revised wind, relative humidity, and degree day data to reflect period between 1990 and 2013. Note, as can be observed by updated data, little change occurred in averages reported for wind, relative humidity, and degree days. Therefore, the wind rose provided in Figure D4.2-6 is deemed to still be representative of the Sheridan area. Revised Figure D4.2-1, Figure D4.2-11, Table D4.1-1, Table D4.2-2, Table D4.2-3, and Table D4.2-7 in response to this comment.

Comment BJ 3 – Round 2

No comment received.

Response BJ 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 4 – Round 1

Appendix D4, Climatology, Section D4.2.6, Why was 65°F used as the baseline temperature? Also, why were the high and low temperatures set to 86°F and 50°F respectively? Please clarify.

Response BJ 4 – Round 1

Revised text to clarify the choice of high and low temperatures.

Comment BJ 4 – Round 2

No comment received.

Response BJ 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 5 – Round 1

Appendix D4, Climatology, Figure 4.2-11, Are the degree days the total number of days that match the data points for the entire period from 1961 through 1990? This

indicates that the data represented along the Y axis covers a period of 30 years on a daily basis. Please clarify.

Response BJ 5 – Round 1

Revised text with definitions of heating, cooling, and growing degree days to clarify Figure 4.2-11. Degree days are essentially a unit of measure like temperature, velocity, etc. A degree day signifies the number of degrees per day to heat or cool to a specified base temperature (most commonly 65°F). Each degree day is summed over the course of a month to estimate the total number of degree days that month. For example, July may have 0 heating degree days because all days are over 65°F, but will have cooling degree days nearly every day of the month. Figure 4.2-11 shows the average monthly degree days over the specified periods of data.

Comment BJ 5 – Round 2

No comment received.

Response BJ 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Appendix D5

Comment BJ 6 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Section D5.4.1, Paragraph 2 refers to "marginally suitable Selenium levels" as defined in LQD Guideline No.1. Guideline 1 has two separate sets of chemical quality criteria tables. Appendix 1 occurs on pages 17-21 as well as on pages 38-43. The first set of tables have been superseded by the second set of tables. Please use the tables on pages 38-43 when determining material suitability. The first Appendix 1 is being removed from the guideline.

The newer tables define the Selenium target as follows:

Suitable < 0.3 ppm

Marginal 0.3 – 0.8 ppm

Unsuitable > 0.8 ppm (dependent on premining water quality and overburden quality)

These values are established for uplands and ephemeral drainages unless it can be shown that Selenium impregnated materials will be buried above the groundwater potentiometric surface and below the reclaimed surface root zone. Other quality criteria have not changed.

Response BJ 6 – Round 1

Revised text as requested to reflect the revised LQD Appendix 1.

Comment BJ 6 – Round 2

No comment received.

Response BJ 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 7 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Figure D5.3-2, What units are expressed in the figure as the %g? Please include a footnote clarifying the measurement parameter.

Response BJ 7 – Round 1

Updated Figure D5.3-2 as requested.

Comment BJ 7 – Round 2

No comment received.

Response BJ 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 8 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-1, Are the Northings and Eastings in State Plane coordinates? It is assumed that they are but please verify this. The title at the top of the page could read Drill Hole Tabulations (State Plane Coordinates)

Response BJ 8 – Round 1

Updated as requested.

Comment BJ 8 – Round 2

No comment received.

Response BJ 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 9 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-2, Please rearrange the Lithologic and Electric logs in such a way that the Electric log immediately follows the Lithologic log. This allows for a more comprehensive examination of the data.

Response BJ 9 – Round 1

Rearranged logs as requested.

Comment BJ 9 – Round 2

No comment received.

Response BJ 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 10 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Holes R12-000 through R12-020 have the Northings and Eastings reversed. Please correct.

Response BJ 10 – Round 1

Updated as requested.

Comment BJ 10 – Round 2

No comment received.

Response BJ 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 11 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, The Lithologic logs with the AMBRE designation 02, 03, and 04 do not have coordinates or elevations. Please provide coordinates and elevations for these three holes.

Response BJ 11 – Round 1

Updated as requested.

Comment BJ 11 – Round 2

No comment received.

Response BJ 11 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 12 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Hole R13-018 appears to have erroneous coordinates. The Northing is listed as 11,941,802. It should probably be 1,941,802. The elevation is shown as 43,887.9, where it should probably be closer to 3,887.9. Please verify and correct.

Hole R13-024 has a very high Northing at 61,941,541 and elevation at 73,885.4. These may be 1,941,541 and 3,885.4, respectively. Please verify and correct

Response BJ 12 – Round 1

Updated as requested.

Comment BJ 12 – Round 2

No comment received.

Response BJ 12 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 13 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, A suggestion for future exploration: Ask the geophysical logger to reduce the gain on the gamma logs. The readjustment bounce on the logs makes them a bit difficult to read and interpret.

Response BJ 13 – Round 1

No response required.

Comment BJ 13 – Round 2

No comment received.

Response BJ 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 14 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-5, Pg. D5-5-4, The splitting tensile strength tests were run on four (4) samples from two (2) holes representing roof, coal, and floor conditions.

a) Why were these locations used as representative of the lithologies encountered during mining?

b) Are these few samples representative of all conditions expected to be encountered by the continuous miner (CM)?

Please elaborate and clarify the narrative. A statement must be made that strength testing will be performed on at least one set of samples per mining panel prior to use of the CM to insure that conditions are favorable for roof retention without subsidence. Lithology in this area is inconsistent and rock strength can vary accordingly. Using the data provided on the four samples tested indicates that some of the overburden from hole R13-19 is unsuitable for highwall mining, based on the CAT® Site Evaluation Tool For Highwall Miners;

(http://webtools.cat.com/globalmining/highwallminers/index.html).

Response BJ 14 – Round 1

Appendix D5 Section D5.3.3.2 has been updated as requested.

Comment BJ 14 – Round 2

No comment received.

Response BJ 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 15 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Addendum D5-4, Exhibits 1 – 7, Please include the drill hole locations on these isopach maps.

Response BJ 15 – Round 1

Updated as requested.

Comment BJ 15 – Round 2

No comment received.

Response BJ 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 16 – Round 1

Appendix D5, Topography, Geology, and Overburden Assessment, Exhibit 8, The map labeled as the isopach map of the Lower Masters bed is a contour of a surface. Please replace the contour map with the appropriate isopach map

Response BJ 16 – Round 1

Updated as requested.

Comment BJ 16 – Round 2

No comment received.

Response BJ 16 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 59 – Round 1

EXHIBITS, Addendum D5-4, Exhibit 1, The title on the map declares that this is an overburden isopach, but the bed name is missing. Please indicate which bed this map pertains to.

Response BJ 59 – Round 1

Updated Exhibit 1 of Addendum D5-4 as requested.

Comment BJ 59 – Round 2

No comment received.

Response BJ 59 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 60 – Round 1

EXHIBITS, Addendum D5-4, Exhibit 8, The name of the PDF file for this exhibit indicates that this is an isopach map of the Masters Lower coal bed. The title in the map indicates that this is the contour of the base of the Masters coal seam. Please correct the title of the PDF file.

Response BJ 60 – Round 1

The title of Exhibit 8 of Addendum D5-4 will be revised in the electronic copy, as requested.

Comment BJ 60 – Round 2

The title of Exhibit 8 in Addendum D5-4 remains unchanged. This appears to be an inadvertent oversight on the part of WWC.

The Current PDF file name is:

ADD_D5_4_EX_8_MASTERS_ISO-MASTERS_LOWER_R1.

The Title of the map in the Title Block is:

BOTTOM ELEVATION OF MASTERS COAL SEAM.

Please correct the name on the PDF file to better represent the contents of the exhibit.

Response BJ 60 – Round 2

Thank you for catching the oversight. The name on the PDF file has been changed to more accurately represent the contents of the map. The PDF with the corrected name will be emailed to Mr. Kristiansen.

Comment BJ 60 – Round 3

No comment received.

Response BJ 60 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment BJ 61 – Round 1

EXHIBITS, Addendum D5-6, Exhibit 1, we commend RAMACO for sampling overburden locations on 80 acre spacing. There are some gaps in the sampling plan, however, that need to have core holes drilled to fill them. The underground Coal Rules and Regulations in Chapter 7, Section 1(a)(i) are specific on ensuring that overburden geology is characterized in all locations where overburden will be removed or subsidence may occur. This essentially means that all areas above the planned coal panels need representative cores drilled to a sufficient density, approximately one hole for every quarter section of affected area. Based on that, the following locations still need to be characterized by overburden sampling:

NE1/4, sec.22, T.57N., R.84W.

NW1/4, sec.15, T.57N., R.84W.

NW1/4, sec.14, T.57N., R.85W.

SE1/4, sec.10, T.57N., R.85W.

Response BJ 61 – Round 1

A drilling rig was not able to enter the areas NW1/4, Sec.14, T.57N., R.85W and SE1/4, Sec.10, T.57N., R.85W. due to the steepness of the terrain, therefore no samples were obtained. Sampling data for drill holes BH 166-78 and BE 326-78 have been incorporated into Addendum D5-2 and Addendum D5-7 to characterize the overburden in Sections 15 and 22.

Comment BJ 61 – Round 2

No comment received.

Response BJ 61 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 62 – Round 1

EXHIBITS, Addendum D5-6, Exhibit D5.1-1, Kudos to the staff member that created this slope analysis map. It is clear and concise and the histogram is very informative. Good job.

Response BJ 62 – Round 1

Thank you for this comment.

Comment BJ 62 – Round 2

No comment received.

Response BJ 62 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 1 – Round 1

Appendix D5, The Coal Rules and Regulations, Chapter 7, Section 1(a)(i)(A) states that information required for the geological description pursuant to Chapter 2, shall be as follows: for areas where surface operations and facilities will cause removal of overburden down to a level of the coal seam, all information outlined in Chapter 2. Overburden sampling has not been performed in many of the locations where overburden will be removed during the mining operations. Additional sampling will be required to assess overburden chemistry in all areas where overburden removal will occur. The intensity of sampling should be 1 core per 160 acres (per quarter section). The LQD requests sampling every 1,900 linear feet on longer proposed disturbance areas or, at minimum, two cores within shorter disturbances separated sufficiently to provide a representative characterization of the proposed disturbance.

> a. Not all overburden has been characterized during analysis. Several lenses of shallow coal mixed with partings or narrow coal seams that will not be mined were not characterized. Because all overburden must be handled so as not to negatively affect surface water, groundwater or vegetation, all overburden must be adequately characterized. Therefore, the LQD requests additional characterization of all overburden that will be backfilled into disturbed areas. It must also be stated that special handling and/or identification and use of topsoil/subsoil replacement may be required if unsuitable backfill or soil is

placed within 4 feet of the surface on upland areas or within 10 feet of the surface in stream channels.

Response DS 1 – Round 1

Please see response to BJ 61.

Comment DS 1 – Round 2

Response is not adequate. The LQD requires additional overburden suitability analysis to be included for all areas to be disturbed during mining. No additional baseline overburden suitability assessment laboratory data was provided for holes BH 166-78 and BE 326-78. Please provide the raw data. Also, provide a commitment to sample overburden from areas to be disturbed by mining (specifically identify the pit sequence) where overburden baseline was not provided during baseline sampling. Sample every 1,300 feet in the sequence prior to overburden removal. Report the analytical results in the annual report for the year of initial disturbance for the pit sequence. Also, since RAMACO is reluctant to provide a special handling commitment, sampling must be performed at 500 ft. spacing on backfilled and rough graded pits (4 ft. depth on upland areas and 8 ft. depth under stream channel or permanent impoundments) to assure quality of surface materials. Also, if groundwater is expected in the pits, unsuitable materials must not be placed in the groundwater zone. Of the backfilled pit. (DS)

Response DS 1 – Round 2

For the location of the laboratory data for holes BH 166-78 and BE 326-78, please refer to Response BJ 61 (Round 1). Sampling data for drill holes BH 166-78 and BE 326-78 have been incorporated into Addendum D5-2, Addendum D5-7 and Table D5.4-2.

For the following commitments, please refer to the Mine Plan since these commitments are for operations rather than baseline studies. Please note that the text for these commitments has been in place. The following discussion provides the location of each commitment.

1. Section MP.4.6.1 states that the overburden sampling program will include one drill hole sample taken every 40 acres (16 sample locations per square mile) within areas where surface operations will cause removal of overburden down to the level of the coal seam. The delineation of 40 acres more correctly states the suggestion in Guideline No. 1 on page 9 in Section II(B)(3)(a)(1) as opposed to the suggestion of 1,300 feet. The first paragraph of Section MP.4.6.1 states that any additional overburden quality sampling will be submitted to WDEQ/LQD in the mine's annual reports. No changes have been made in response to this comment since the text has been in place.
2. Section MP.4.6.2 states in the first paragraph that a backfill sampling program will be set on a 500-foot grid. The first paragraph of Section MP.4.6.2 also

states that the sampling program will ensure that unsuitable materials aren't placed within the following depths of the land surface: four feet for uplands, six feet for ephemeral channels, and 10 feet for permanent impoundments or major channels and their 100-year floodplains. No changes have been made in response to this comment.

Comment DS 1 – Round 3

Response is not adequate. The LQD requires additional overburden suitability analysis to be included for all areas to be disturbed during mining. No additional baseline overburden suitability assessment raw data was provided for areas to be disturbed as previously requested.

Response DS 1 – Round 3

A commitment to obtain necessary overburden samples and conduct overburden suitability analysis prior to mining related disturbance, as required by WDEQ/LQD, has been incorporated into Section MP.4.3 of the Mine Plan. Also a commitment to obtain samples at least every 1,500 feet of trench length and at both ends of a trench has been added to Section MP.4.3. No change to Appendix D5 was made in response to this comment.

Comment DS 2 – Round 1

Appendix D5, Section D5.4. – documentation of protocols that differ from those approved by the Administrator in Guideline 1 typically require a signed document by LQD staff, not a request for different procedure signed by the company. This issue has been discussed with other mining companies and it has been determined that documentation of approval by LQD staff will be required if sampling/analytical protocols differ from those required by standing LQD policy. Please provide documentation of LQD staff approval for the 10-ft. overburden sampling interval.

Response DS 2 – Round 1

See Attachment A to this response package. This has also been added to Addendum D5-6 pages 4 and 5.

Comment DS 2 – Round 2

No comment received.

Response DS 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 3 – Round 1

Appendix D5, Table D5.4-1 and Table D5.4-2 do not provide the current approved selenium concentration limits of 0-3 ppm (suitable), 3-8 ppm (marginal) and > 8 ppm

(unsuitable). Please be sure to include the current approved suitability criteria as shown in Guideline 1, page 42. This will change the conclusions of the discussion provided in the Appendix D5 text. Also, in Table D5.4-2, please provide the correct units for analytical results in mg/Kg, not mg/L.

Response DS 3 – Round 1

Please refer to BJ 6 response. Appendix D5 text, Table D5.4-1, and Table D5.4-2 are updated as requested.

Comment DS 3 – Round 2

No comment received.

Response DS 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 4 – Round 1

Appendix D5, The permit application provided to LQD staff for review has duplicated data provided after the map identified as Exhibit 1 which should be deleted. The exhibit should also be better identified as Exhibit D5-1 or something similar to clarify placement in the permit application should it become separated from the document in the future.

Response DS 4 – Round 1

The electronic copies were provided to LQD staff for review purposes. The hard copy on file is the official version. Also, please see response to Comment DS 5.

Comment DS 4 – Round 2

Response is not adequate. This issue was not addressed in the Round 1 comment response package. Duplicate data in the hard copy should be deleted.

Response DS 4 – Round 2

The duplicate soil analysis reports have been removed from Appendix D5. The reports were removed from Addendum D5-5 (pages Addendum D5-5-21 through Addendum D5-5-92). The reports remain in Addendum D5-7 since this is the addendum specified for the soil analysis reports. The Change Index identifies this revision. No other change is necessary since page Addendum D5-5-92 was the last page and Addendum D5-6 has unique pagination.

Because the exhibit name of "Exhibit 1" is specific to the overburden sampling plan of 8/26/2013 that was presented to WDEQ, and this name is referenced in the document, the name has not been changed. The exhibit has a unique page number

(page Addendum D5-6-3) which will ensure that the exhibit is always located properly in the permit.

Comment DS 4 – Round 3

Response is not adequate. Two of the first proposed disturbance areas in Sections 22 and 15 have no overburden baseline sample analyses provided. The LQD understands that these areas are not accessible by drilling equipment at this time, but baseline sampling is required prior to initial disturbance. Therefore, the LQD may be amicable to approval of the application if a condition exists to provide an Appendix D5 revision with overburden.

Response DS 4 – Round 3

A commitment to obtain necessary overburden samples and conduct overburden suitability analysis prior to mining related disturbance, as required by WDEQ/LQD, has been incorporated into Section MP.4.3 of the Mine Plan. Also a commitment to obtain samples at least every 1,500 feet of trench length and at both ends of a trench has been added to Section MP.4.3. No change to Appendix D5 was made in response to this comment.

Comment DS 5 – Round 1

Appendix D5, Comparisons were made between Exhibit 1, the soils map and the Mine Plan map. Distinct differences in the affected area and permit boundaries were observed. Please be sure that correct boundaries for the proposed affected area and permit area are provided on all maps. Please also provide the contour interval on this exhibit.

Response DS 5 – Round 1

Addendum D5-6 is a copy of the overburden sampling plan as presented to WDEQ on 8/26/2013, which referenced Exhibit 1. Therefore, no changes to the exhibit will be made.

Comment DS 5 – Round 2

Response is not adequate. All exhibits presented in this permit must show the correct permit boundary and affected area boundaries, or, if the boundaries are removed, must reference a map of the same scale that contains the correct boundaries. Please correct the permit boundaries and affected area boundaries on all exhibits in this permit application.

Response DS 5 – Round 2

The permit boundary on Exhibit 1 in Addendum D5-6 was removed from the exhibit due to this boundary not being the same as that presented in the current permit as requested by the reviewer. However, the current boundary was not added to the

exhibit because this exhibit represents the information provided to, and approved by, WDEQ for the overburden sampling plan. Instead, a note has been added to the exhibit that references Exhibit C1a of the Adjudication File for the correct permit boundary of the Brook Mine.

Comment DS 5 – Round 3

No comment received.

Response DS 5 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 2 – Round 1

Appendix D5, Page D 5-9 refers to samples collected from roof and floor from "many" locations throughout the permit area. However, supporting documentation appeared to be from only two borings and included two roof and one floor sample. In addition, the laboratory noted the floor sample did not have sufficient length and a correction factor was used to determine unconfined compressive strength. Additional structural analysis of the overburden, interburden and floor is required.

Response KM 2 – Round 1

During preparation of the MSHA Ground Control Plan additional coring of the coal and overburden will occur, data gathered from this activity will be supplied to WDEQ/LQD when it is received. Please see response to BJ 14.

Comment KM 2 – Round 2

No comment received.

Response KM 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 3 – Round 1

Appendix D5, Please provide a discussion of the structural analysis of the overburden and interburden. The discussion shall address the potential for subsidence during and after mining.

Response KM 3 – Round 1

Structural analysis of the overburden, interburden, floor, and roof must be conducted for the MSHA Ground Control Plan. Information gathered for this plan will be provided when it is received. No text was updated in response to this comment. Please see response to BJ 14.

Comment KM 3 – Round 2

No comment received.

Response KM 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 4 – Round 1

Appendix D5, Please discuss the aquifer(s) below the lowest coal seam and the potential for mining to impact these aquifer(s).

Response KM 4 – Round 1

The lowest coal seam targeted for mining is largely dry and is also confined by a clay layer. The underburden is not considered an aquifer therefore no impacts will occur.

Comment KM 4 – Round 2

No comment received.

Response KM 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 24 – Round 3 (New Comment)

On page D5-12, Section D5.3.3.4, please specify what the underburden produces at 0.5 gpm.

Response KM 24 – Round 3 (New Comment)

Section D5.3.3.4 has been revised to clarify that groundwater is produced in the underburden at 0.5 gpm.

Comment Muk 1 – Round 1

Appendix D5, Section D5.3.3.2 Overburden and Interburden, 1. This section provides a discussion of the thickness of interburden and not overburden. Please provide a discussion (or a reference) on the thickness of the overburden. (MK)

Response Muk 1 – Round 1

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.2.

Comment Muk 1 – Round 2

Response not accepted. In addition to the reference to Addendum D5-3 cross section figures, please provide a textual interpretation on the overburden thickness. Please

refer to D53.3.2 interburden thickness description as an example for the requested description. (MK)

Response Muk 1 – Round 2

A qualitative discussion of the Carney overburden thickness has been added to the first paragraph of Section D5.3.3.2.

Comment MuK 1 – Round 3

Response accepted.

Comment Muk 2 – Round 1

Appendix D5, Section D5.3.3.3 Coal, 2. On Page D5-10, there is a good discussion about the thickness of the two coal seams. Please provide a description on the depth from land surface to these coal seams. (MK)

Response Muk 2 – Round 1

A reference to the geologic cross-sections Addendum D5-3 has been added to Section D5.3.3.3.

Comment Muk 2 – Round 2

Response not accepted. In addition to the reference to Addendum D5-3 cross section figures, please provide a textual description/interpretation on the depth from land surface to the different coal seams targeted by the mine plan. (MK)

Response Muk 2 – Round 2

A qualitative description of the overburden material from the ground surface to the top of the Carney coal seam has been added to the middle of the second paragraph of Section D5.3.3.3. Discussion of the total material from the ground surface to the top of the Masters Seam has been added to the end of the third paragraph in Section D5.3.3.3. As requested, the revised text adds qualitative background on the varying depths of the total material from the land surface to the top of the two respective target coal seams, Carney and Masters.

Comment MuK 2 – Round 3

Response accepted.

Comment Muk 3 – Round 1

Appendix D5, Section D5.3.3.3 Coal, 3. Page D5-10 states, "Monarch seam exist within isolated portions of the mine areas as shown on the geologic cross sections in Addendum D5-3 and may present a secondary target." However, Table D5.3-2 does not provide the coal quality characteristics for Monarch coal seam. If Monarch seam

is part of the mine plan, please include the coal quality characteristics of Monarch coal seam in Table D5.3-2 and a description of thickness and depth from land surface.

Response Muk 3 – Round 1

Table D5.3-2 has been updated with the coal quality characteristics for the Monarch seam. The overburden and seam thickness are included on the geologic cross-sections located in Addendum D5-3 referenced in the text.

Comment Muk 3 – Round 2

Response not accepted. It is acknowledged and accepted that Table 5.3-2 is updated with coal quality characteristics of Monarch coal seam. In addition to the reference to Addendum D5-3 cross section figures, provide a textual interpretation of thickness and depth from land surface for the Monarch coal seam. (MK)

Response Muk 3 – Round 2

Textual interpretation of the Monarch coal seam thickness and the depth of material above the top of the Monarch seam have been added to the end of fourth paragraph in Section D5.3.3.3.

Comment MuK 3 – Round 3

Response accepted.

Comment Muk 4 – Round 1

Appendix D5, Section D5.3.3.3 Coal, 4. Please include a discussion on Dietz (1, 2, 3) coal seams, if they are present in the mine permit boundary. If they are part of the mine plan, please include the coal quality characteristics in Table D5.3-2. (MK)

Response Muk 4 – Round 1

Discussion about the Dietz seams has been added in Section D5.3.3.3. These coal seams are not part of the currently proposed Mine Plan. Therefore, the quality data were not included in the table.

Comment Muk 4 – Round 2

No comment received.

Response Muk 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 5 – Round 1

Appendix D5, Section D5.3 Geology of Mine Area, 5. Please provide a description of the stratigraphic units below the Masters coal seam. (MK)

Response Muk 5 – Round 1

Section D5.3.3.4 has been added to discuss the underburden.

Comment Muk 5 – Round 2

Response not accepted. Please expand the discussion in the newly added Section D5.3.3.4 to include a textual interpretation of the underburden thickness. (MK)

Response Muk 5 – Round 2

The text in Section D5.3.3.4 has been revised to include discussion of the underburden thickness.

Comment MuK 5 – Round 3

Response accepted.

Comment Muk 6 – Round 1

Appendix D5, Addendum D5-3 Geologic Cross Sections, 6. Several of the geologic cross sections show UNK – unknown coal seam (Stringer). Please include a brief discussion about this stringer in Section D5.3.3.3 (MK)

Response Muk 6 – Round 1

Discussion about the stringers with unknown names has been added to fifth paragraph in Section D5.3.3.3.

Comment Muk 6 – Round 2

Response not accepted. In addition to the reference to cross section figures, please provide a textual description on the variability, interpreted thicknesses of these stringers. (MK)

Response Muk 6 – Round 2

Further discussion of the unknown coal stringers has been added to the end of the fifth paragraph of Section D5.3.3.3.

Comment MuK 6 – Round 3

Response accepted.

Comment Muk 7 – Round 1

Appendix D5, Addendum D5-4 Isopachs, 7. Please include the wells/drill holes (control points) used to interpret the isopachs and elevation contours in the maps. In addition, label all the control points with names and the thickness (or elevation, as

appropriate). This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Response Muk 7 – Round 1

Addendum D5-4 Exhibits 1 to 8 have been updated with drill hole locations as requested. A reference to Addendum D5-2 has been added to the exhibits for seam name and thickness.

Comment Muk 7 – Round 2

Response not accepted. It is acknowledged and accepted that the labels for all the control point names were included. However, thickness (or elevation, as appropriate) labels are not included as requested. Is it relatively easy for the software that was used for isopach elevation contours to label the thickness (or elevation)? The intent of this comment is to increase the robustness of the review of the interpreted contours by having appropriate point control data plotted in the same map. This comment is applicable to Addendum D5-4, Exhibits 1 through 8. (MK)

Response Muk 7 – Round 2

As requested, Addendum D5-4 Exhibits 1-8 have been revised to include thickness or elevation, as appropriate, of the applicable seam at each drill hole. It's worth noting, that generally the thicknesses/elevations were obtained from the lithologic logs in Addendum D5-2; however, some drill holes were interpreted differently using analysis of the electric logs (Addendum D5-2), lithologic logs (Addendum D5-2) and cross sections (Addendum D5-3).

Comment MuK 7 – Round 3

Response not accepted. The Table of Contents for Addendum D5-4 indicates that there is an "Exhibit l: Overburden Isopach Overlying the Carney Coal Seam". This Exhibit is not present in the Cheyenne Office copy of the Round 2 response submittal. (MK)

Response MuK 7 – Round 3

Exhibit 1 Overburden Isopach Overlying the Carney Seam was inadvertently left out of the Round 2 comment response package. The exhibit has been provided as part of the Round 3 response package.

Comment Muk 8 – Round 1

Appendix D5, Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table, 8. Please describe these analyses, methodology, results and provide an interpretation of their applicability to the mine/reclamation plan. (MK)

Response Muk 8 – Round 1

Please see response to BJ 14.

Comment Muk 8 – Round 2

No comment received.

Response Muk 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Appendix D6

Comment BJ 17 – Round 1

Appendix D6, Hydrology, Section D6.2.3, Pg. D6-20, Narrative in the last paragraph – why were no samples taken in Hidden Water Creek? Please explain.

Response BJ 17 – Round 1

No flow was observed in Hidden Water Creek during baseline sampling, so no samples were taken. The text has been revised to reflect that there were no flows observed.

Comment BJ 17 – Round 2

No comment received.

Response BJ 17 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 18 – Round 1

Appendix D6, Hydrology, Table D6.1-8, Regarding the HEC-RAS modeling results – The values for Hidden Water Creek and Slater Creek are identical. Is this accurate or is it a typographical error? Please clarify.

Response BJ 18 – Round 1

Updated table to remove typographical error.

Comment BJ 18 – Round 2

No comment received.

Response BJ 18 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 19 – Round 1

Appendix D6, Hydrology, Addendum D6-7, The well construction summary sheets need to have the coal bed names listed on the well lithology sections to the right of the well diagrams. Please label accordingly.

Response BJ 19 – Round 1

Updated as requested.

Comment BJ 19 – Round 2

No comment received.

Response BJ 19 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 20 – Round 1

Appendix D6, Hydrology, Attachment D6-8-A, Pg. D6-8-20, A statement is made that water within both coal seams is expected to be "high quality" and "good" water. Please define the meaning of those characterizations. Are these judgments based on MCLs or some other value? Are they being classified by some constituent values? Or is there another metric being used? Please clarify.

For example; referencing WQD R&R, Chapter 8, Table I, Class I, II, or III would better define the essential characteristics of the water quality. Numerical values of critical constituents, such as TDS, could also serve to define the quality as "good". More descriptive qualifiers are needed to judge the water quality.

Response BJ 20 – Round 1

Revised text as requested.

Comment BJ 20 – Round 2

No comment received.

Response BJ 20 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 21 – Round 1

Appendix D6, Hydrology, Attachment D6-8-E, Hydrographs, The x parameter, time, is depicted in days. It appears that this scale should have been adjusted to show time in hours due to the rapid changes seen in the hydrographs. Please use a finer scale for the x axis.

Response BJ 21 – Round 1

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-36a and D6-8-37a. These additional hydrographs detail the

water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 21 – Round 2

No comment received.

Response BJ 21 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 22 – Round 1

Appendix D6, Hydrology, Attachment D6-8-F, The above mentioned comment can also be applied to the Carney well hydrographs. Please adjust the x axis to hours.

Response BJ 22 – Round 1

The hydrographs were originally set up with the x axis in days to allow the reader to review recovery data as well. Rather than modifying the original hydrographs, additional hydrographs, each of which depict the time axis in hours, were developed and included as pages D6-8-39a and D6-8-40a. These additional hydrographs detail the water level changes over the portion of the pumping test period where the water level changes in the wells were the most rapid.

Comment BJ 22 – Round 2

No comment received.

Response BJ 22 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 23 – Round 1

Appendix D6, Hydrology, Addendum D6-9, Pg. D6-9-2, Please include a column in Table D6-1 that indicates the elevation of the bottom of the well or TD. The total water column is important when assessing groundwater characteristics. Please correct.

Response BJ 23 – Round 1

Table D6-1 has been revised as requested.

Comment BJ 23 – Round 2

No comment received.

Response BJ 23 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 24 – Round 1

Appendix D6, Hydrology, Addendum D6-10, Pgs. D6-10-28 through D6-10-53, On the sample analysis reports, Please provide a brief narrative at the beginning of the lab results to give context to the data. Footnotes on the pages refer to MCLs or other parameters of water quality used for classification. However, the context that is used to define these parameters is missing. The assumption is made that these quality values are derived from the WQD R&R, Chapter 8, Table I definitions. But that is uncertain as no frame of reference is given. A brief sentence or two at the beginning of the section would clarify the numerical standards used in the report. Please adjust the narrative accordingly.

Response BJ 24 – Round 1

Page D6-10-27a was added to provide the requested narrative.

Comment BJ 24 – Round 2

No comment received.

Response BJ 24 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 25 – Round 1

Appendix D6, Hydrology, Please include the lithology of the sampled zone, either in the sampling information sheets, or on the sample analysis reports. Identification of the lithology sampled needs to be readily available with the analysis. This applies to all increments sampled. The sampled zones do have identification on the sample sheets with a shorthand nomenclature but persons unfamiliar with the lithology of the prospect area would be at a disadvantage when evaluating the sample results. A simple reference table at the beginning of the section would be sufficient. For example; MST=Masters, CRN=Carney, AL=Alluvium. Non-geologists need some frame of reference. Please create a clarifying narrative.

Response BJ 25 – Round 1

Reference text with abbreviations defined has been added on page Addendum D6-10-27a, as requested.

Comment BJ 25 – Round 2

No comment received.

Response BJ 25 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 2 – Round 1

Appendix D6-Hydrology, D6.1x – The drainage basin description and surface water quantity sections are lacking detail. As mentioned in M. Kunze's comments, the data from the terminated Slater Creek USGS gauge, and historical monitoring data from Big Horn Mine (permit no. 213) should be included.

The data collected at the monitoring stations that is presented in Addendum D6-4 does not appear to agree with the statement that Slater Creek is a "predominantly ephemeral" stream. Please reconcile the text with the data.

Response DM 2 – Round 1

Peak flow data from the USGS gage station on Slater Creek has been provided. See response to MK 30. The text in Section D6.1.5.2 has been updated to clearly indicate that Slater Creek is an ephemeral stream.

Comment DM 2 – Round 2

No comment received.

Response DM 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 3 – Round 1

Appendix D6-Hydrology, D6.2.4 States that Groundwater Rights are in Appendix E2 of the Adjudication Volume. Groundwater Rights are actually listed in Appendix B2. Please Correct.

Response DM 3 – Round 1

Text revised as requested.

Comment DM 3 – Round 2

No comment received.

Response DM 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 5 – Round 1

Appendix D6, 2. The pre-mining potentiometric map for the Masters coal seam shows the elevation of the groundwater at a higher elevation than the surface elevation in Sections 11 and 12 (in the vicinity of Slater Creek outside of the permit area). Either show the potentiometric surface as doted across this area or revise the potentiometric

lines such that the groundwater elevation is below the ground surface elevation. Issue addressed by BJ Kristiansen. Please see comment No. 65.

Response KM 5 – Round 1

Exhibits D6.2-2 and D6.2-3 have been revised as requested.

Comment KM 5 – Round 2

No comment received.

Response KM 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 6 – Round 1

Appendix D6, 3. The groundwater elevation for the Carney coal seam in monitor well 578417-CRN was given as 3795.59. The potentiometric contour for 3800 is drawn south of this monitor well. Please correct the contour line to be consistent with the groundwater elevation shown for monitor well 578417-CRN. Correction of this contour line may also adjust how the contour lines for 3780 and 3760 are drawn, such that they may be drawn consistent with other contour lines.

Response KM 6 – Round 1

Contours in Exhibit D6.2-3 have been revised as requested.

Comment KM 6 – Round 2

No comment received.

Response KM 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 7 – Round 1

Appendix D6, 4. Page D6 8-8: The text refers to the pump test in the Carney coal seam. According to the procedures in the previous section, transducers were placed in CRN and CRN-OB; however on the referenced page, it states transducers remained in MST and MST-OB after pumping. LQD believes this to be a typographical error.

Response KM 7 – Round 1

LQD is Correct, this is a typographical error. The sentence should read "After the pumping period, the transducers remained in CRN1 and CRN-OB until 8:00AM on November 16, 2013." Page D6-8-8 has been updated with the typographical error corrected and a replacement page is included.

Comment KM 7 – Round 2

No comment received.

Response KM 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 8 – Round 1

Appendix D6, 5. Please discuss why the water levels rose in the Carney coal seam during the pump test in the Masters coal seam.

Response KM 8 – Round 1

This comment is addressed in comment 19 from Muthu Kuchanur.

Comment KM 8 – Round 2

No comment received.

Response KM 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 9 – Round 1

Appendix D6, 6. What effect would a leaking pump have on the results of the pump test in the Masters coal seam?

Response KM 9 – Round 1

This comment is assumed to originate from the note on page Addendum D6-8-30. This note is in reference to activities that occurred immediately after the pumping test was shut off. The pump used for the pumping test did not have a foot valve. Therefore, after the pump was shut off, water in the discharge pipe immediately began to drain back into the well. The pump and piping was pulled out of the well as fast as possible and not all of the water in the pipe drained back into the well. However, the personnel conducting the pumping test were concerned that the water draining into the well would result in a rapid rise in the water level in the well and wanted to note it for the record on the field data sheet. It is estimated that less than 2 gallons of water actually drained out of the line into the well while the pump was being pulled which would result in a water level rise in the well of less than 0.25 foot. Given that the water level recovery in the well was very rapid immediately upon cessation of the pumping test (approximately 2 feet in the first ten minutes after the pumping test ended) and the early time recovery data was largely ignored for the purposes of doing the aquifer characterization evaluations, the leaking pump would not have had an impact on the results of the pumping test.

Comment KM 9 – Round 2

No comment received.

Response KM 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 10 – Round 1

Appendix D6, 7. Please make sure all maps that are stamped are also signed and dated by the engineer, as required by regulation.

Response KM 10 – Round 1

All maps that are stamped will be signed and dated by the engineer as required by law. This does not include digital versions. The digital copies have been provided for WDEQ review. The hard copy is the official copy.

Comment KM 10 – Round 2

No comment received.

Response KM 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 17 – Round 2 (New Comment)

Based on LQD's review of the well logs for Wells 578409-CRN-OB and 578409-MST-OB, the wells were screened in a coal seam, not in overburden. Please address all hydrologic information discussing overburden which was based on these wells and which may be in error.

Response KM 17 – Round 2 (New Comment)

The "OB" designation refers to "observation" rather than overburden. It is noted that this is a poor naming convention, but the naming had already been established. We apologize for the confusion. Additionally, Section D6.2.1.1 states that electric logs with resistivity data have demonstrated that the overburden is dry. Section D6.2.2.1 states that no monitoring wells were completed in the overburden or interburden because no water was found in these units during drilling. The nomenclature page in Addendum D6-10 (page Addendum D6-10-27A) has been revised to state: OB=observation.

Comment KM 17 – Round 3

No comment received.

Response KM 17 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 18 – Round 2 (New Comment)

The well logs for 578409-CRN and 578409-CRN-OB show the wells are screened in a coal seam labeled "Masters", not Carney. This appears to be a typographical error on the well log. Please correct.

Response KM 18 – Round 2 (New Comment)

The typographical error has been corrected on the well logs 578409-CRN and 578409-CRN-OB.

Comment KM 18 – Round 3

No comment received.

Response KM 18 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment MK 29 – Round 1

Appendix D6-Hydrology, Section D6.1.2 Drainage Basin Description, 3. On Page D6-2 it is stated that Slater Creek is an ephemeral stream. Aerial imagery shows a riparian area with trees and subirrigation occurring along much of the channel. PEM wetlands are also present as documented in Appendix D10. It would seem that an ephemeral stream may not be able to support these features. Please provide the justification why Slater Creek is considered an ephemeral stream, and that the stream does not contain intermittent characteristics where it is not below the local water table for a portion of the year. (MDK)

Response MK 29 – Round 1

Please see response to DM2.

Comment MK 29 – Round 2

Response not accepted. Please include additional discussion on the hydrology of Slater Creek to include what was added to Page D11-8 in Appendix D-11 in response to Comment MK 8: *Infiltration of precipitation into the burn and then slow release of the stored water acts as a water source for the subirrigation and surface flow of Slater Creek*.

In addition, a comparison of the 2014 observed flows between the upstream and downstream stations on Slater Creek shows that flows were higher at the upstream

station for the majority of the period. This may suggest Slater Creek is a losing stream. Please discuss this further in the description of the hydrology of Slater Creek. (MDK)

Response MK 29 – Round 2

The additional discussion for Slater Creek hydrology has been added to the middle of the third paragraph in Section D6.1.2 as requested.

Comment MK 29 – Round 3

Response not accepted. The additional discussion on the hydrology of Slater Creek was included as requested. However, based on observations from the AVF reconnaissance site visit to Slater Creek on September 24, 2015, Slater Creek should not be characterized as an ephemeral stream. At the time of the site visit, standing water and a small amount of flow was observed in the channel, particularly in Section 12. This flow was observed during a dry period when no precipitation had occurred previously. Therefore the flow was due to some other source besides direct response to precipitation. The permit application indicates that some discharge to Slater Creek occurs from infiltration of precipitation into high perched scoria burn above the stream channel; this water is stored and slowly released to Slater Creek. It appears that this flow may form a shallow water table that provides baseflow to the channel.

In my opinion Slater Creek is better described as an intermittent stream with a few isolated reaches that may be perennial. Please revise any text in the permit application that describes Slater Creek as an ephemeral stream (Page D6-2-Section D6.1.2, Page D6-11 -Section D6.1.5.2, Page D6-11-Section D6. 1.5.3, Page RP-45-Section RP .8.5.2). (MDK)

Response MK 29 – Round 3

Slater Creek has been described as intermittent stream, as requested, in the following areas of the text: in Appendix D6, the third paragraph of Section D6.1.2, the third paragraph of Section D6.1.5.2, the second paragraph of Section D6.1.5.3.; in Appendix D11 the second paragraph of Section D11.3; and in the Reclamation Plan, the first paragraph of Section RP.8.5.2.

Comment MK 30 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 4. The USGS operated a peak flow gage on Slater Creek from 1967 to 1981 (Station No. 06299900, http://nwis.waterdata.usgs.gov/wy/nwis/inventory/?site_no=06299900&agency_cd=USGS). The gage was located just downstream of the proposed permit boundary near the confluence with the Tongue River. Please incorporate the annual peak flow data from this station into the permit application to illustrate the range of peak flows that might be expected from Slater Creek. (MDK)

Response MK 30 – Round 1

The text and Tables D6.1-2 and D6.1-3 have been revised to include peak flow data for USGS Station No. 06299900.

Comment MK 30 – Round 2

No comment received.

Response MK 30 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 31 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 5. Some of the U.S. Army Corps of Engineers references cited in the text (2000, 2001) do not appear in the References Section (Section D6.3). Please add these to the references list. (MDK)

Response MK 31 – Round 1

The text edits have been made as requested.

Comment MK 31 – Round 2

Response not accepted. The citation (U.S. Army Corps of Engineers, 2001) on Page D6-3 still does not appear in the reference list. Please add this to the Reference Section (Section D6.3). (MDK)

Response MK 31 – Round 2

The year in the U.S. Army Corps of Engineers citation on page D6-3 was changed to 2009 to match the references provided in Section D6.3. The change was an inadvertent oversight on the part of WWC.

Comment MK 31 – Round 3

Response accepted.

Comment MK 32 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 6. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section D6.3. (MDK)

Response MK 32 – Round 1

The text edits have been made as requested.

Comment MK 32 – Round 2

No comment received.

Response MK 32 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 33 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 7. Please explain in the text if the existing impoundments (stock reservoirs, old mine pits, etc.) in both the Slater Creek and Hidden Water Creek drainages were considered in the routing functions for the HEC-HMS runoff estimates. These features would likely have an effect on attenuating peak flows. (MDK)

Response MK 33 – Round 1

The text has been revised to clarify the impoundments are not included the HEC-HMS model. As described, peak flow estimates should be conservatively high without attenuation of storm events by impoundments.

Comment MK 33 – Round 2

No comment received.

Response MK 33 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 34 – Round 1

Appendix D6-Hydrology, Section D6.1.3.2 Flood Studies, 8. As the text states on Page D6-5, the HEC-HMS runoff estimates in Table D6.1-7 are higher than the Miller (2003) equation estimates. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) equation estimates.

The Miller (2003) equation for this region used, in part, data from the USGS peak flow gage on Slater Creek, so it would seem that the Miller (2003) estimates may be more reasonable. For example, compared to the HEC-HMS estimates, the 15-year record from the peak flow gage on Slater Creek would not register at anything greater than a five-year event. Furthermore, the May 18, 1978 event on Slater Creek resulted in a peak flow of 1,100 cfs, which according to the HEC-HMS estimates would only be around a 2-year event. USGS studies have shown that the May 1978 flood event was estimated to be a 100-year event on some parts of the Tongue River in this area (http://pubs.usgs.gov/pp/1244/report.pdf). (MDK)

Response MK 34 – Round 1

A discussion in the text has been included that speaks to why the HEC-HMS results are higher than the Miller results. Additionally, a discussion acknowledges the report by the USGS on the May 1978 flood. The Miller analysis does appear to more closely estimate the peak flowrates for flood events for the short data record on Slater Creek. However, hydraulic calculations will continue to use the HEC-HMS results because of the conservative results and the ease in comparing to the postmining hydrologic environment. HEC-HMS provides a way to change the properties of the drainage basins to reflect what will be present postmining, and the comparison between the premining and postmining HEC-HMS models quantifies the magnitude of the impact the Brook Mine will have on the hydrologic balance.

Comment MK 34 – Round 2

No comment received.

Response MK 34 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 35 – Round 1

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 9. Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

Response MK 35 – Round 1

The locations of the surface water monitoring sites have been reported to the quarter-quarter, which is an adequate level of accuracy to report the monitoring locations.

Comment MK 35 – Round 2

Response not accepted. The location coordinates are needed for plotting the locations of the stations; the quarter-quarter does not provide the needed level of accuracy for this. Reporting the northing/easting State Plane coordinates for monitoring locations is standard practice in other LQD coal permits and would be required when reporting station information in the Annual Report as part of the LQD Coal Annual Report Format (CARF). Please add the northing/easting State Plane coordinates for the four Brook Mine surface water monitoring stations to Table D6.1-11. (MDK)

Response MK 35 – Round 2

The northing and eastings for the surface water monitoring station have been added to Table D6.1-11, as requested.

Comment MK 35 – Round 3

Response not accepted. Although the coordinates were included in Table D6.1-11 as requested, the location appears incorrect for the upstream monitoring station on Slater Creek (SM578512-SW-1). During the AVF reconnaissance site visit to Slater Creek on September 24, 2015, station SM578512-SW-1 was observed approximately 1,800 feet downstream from where it is currently shown in Exhibit D6.1-2. Please see the attached map and photo below. Please also note that the location observed in the field matches what is shown in Addendum D6-5 Figure D6-2. Please provide the correct coordinates and location for station SM578512-SW -1 in Table D6.1-11 and Exhibit D6.1-2. Please also update the coordinates in Table MP.7- l and the appropriate permit application Exhibits (Exhibit D6. l-2, Exhibit MP.7- l, Exhibit RP.8-5) to show the correct location of the station. (MDK)

Response MK 35 – Round 3

The locations of all the surface water stations have been revised throughout the permit to correctly match the surveyed locations. The following tables and exhibits have been revised as requested: Table D6.1-11, Table MP.7-1, Exhibit D6.1-2, Exhibit MP.7-1 and Exhibit RP.8-5.

Comment MK 36 – Round 1

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations,10. On Page D6-8, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

Response MK 36 – Round 1

The text has been revised as requested.

Comment MK 36 – Round 2

No comment received.

Response MK 36 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 37 – Round 1

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 11. On Page D6-8, second paragraph, it states that increased E.Coli from samples collected in 2006 were attributable to high flows in May-June 2010. Were the samples also collected in 2010 and not 2006? Please revise this sentence. (MDK)

Response MK 37 – Round 1

The sentence was revised to read more clearly. The sentence was saying that samples taken in 2010 experienced an increase in E.Coli bacteria compared to the samples collected in 2006.

Comment MK 37 – Round 2

No comment received.

Response MK 37 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 38 – Round 1

Appendix D6-Hydrology, Section D6.1.5.1 Monitoring Stations, 12. On Page D6-8, second paragraph, it would be informative to add that, in addition to the SCCD, other entities such as the Big Horn Mine, USGS, and WDEQ/WQD have collected water quality data on the Tongue River and Goose Creek near the proposed mine. It may also be informative to mention that sections of the Tongue River in the vicinity of the proposed mine are on the State's 303(d) list since certain uses are not supported due to impaired water quality. Goose Creek has also been on the 303(d) list in the past and a TMDL has been prepared. Information can be found at: http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/ and http://deq.wyoming.gov/wqd/tmdl/. (MDK)

Response MK 38 – Round 1

The text has been revised as requested. Refer to Section D6.1.5.1.

Comment MK 38 – Round 2

No comment received.

Response MK 38 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 39 – Round 1

Appendix D6-Hydrology, Section D6.1.5.2 Surface Water Quantity, 13. The Big Horn Mine (WDEQ/LQD Permit 213) operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. This station was located approximately ¼ mile upstream from station SM578415-SW-1 that was installed by the Brook Mine. The LQD Hydrology Database contains mean daily flow data from this station from 1982 to 1997, although several years are missing data. Baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic

format upon request or a more complete dataset may be available if requested from the Big Horn Mine. (MDK)

Response MK 39 – Round 1

Please see response to DM 2 and MK 30.

Comment MK 39 – Round 2

Response not accepted. The response referenced Comments DM 2 and MK 30, which refer to Slater Creek, not Hidden Water Creek. The LQD emailed the Hidden Water Creek data to WWC Engineering on July 8, 2015. Please incorporate and discuss the data to strengthen the baseline water quantity characterization of Hidden Water Creek in the Brook Mine permit application. (MDK)

Response MK 39 – Round 2

Please refer to the added text at the bottom of the second paragraph of Section D6.1.5.2 summarizing the flow data from the Big Horn Mine Hidden Water Creek former surface water monitoring station, HWC1-79. In addition, Table D6.1-14 has been added which provides the number of flow days per month and the maximum average flow for each day during a given flow month for the 1982 through 1997 period of record. The approximate location of HWC1-79 has been added to Exhibit D6.1-2.

Comment MK 39 – Round 3

Response accepted.

Comment MK 40 – Round 1

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 14. Please briefly discuss in the text the water quality results from Slater Creek in the context of WQD Surface Water Quality Standards for Class 3B waters (see Chapter 1 of WQD Rules and Regulations). This would reveal whether or not designated uses were being met prior to mining. The two samples from Slater Creek indicate no exceedances of Class 3B criteria, indicating uses are supported. (MDK)

Response MK 40 – Round 1

The text has been updated as requested.

Comment MK 40 – Round 2

No comment received.

Response MK 40 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 41 – Round 1

Appendix D6-Hydrology, Section D6.1.5.3 Surface Water Quality, 15. It is understood that water was not flowing in Hidden Water Creek so the applicant could not collect a sample for baseline purposes. However, as previously mentioned, the Big Horn Mine operated a station on Hidden Water Creek (HWC1-79) from 1979 to 1998. The LQD Hydrology Database contains nine water quality samples collected at this site from 1979 to 1989. Baseline characterization of Hidden Water Creek in the Brook Mine permit application would be strengthened if these data were incorporated and discussed. The LQD can provide these data in electronic format upon request. (MDK)

Response MK 41 – Round 1

Request for information is pending. No update to the permit has occurred at this time in response to this comment.

Comment MK 41 – Round 2

Response to the comment is pending. As discussed in the review of the response to Comment MK 39, the LQD emailed the Hidden Water Creek data to WWC Engineering on July 8, 2015. Please incorporate and discuss the data to strengthen the baseline water quality characterization of Hidden Water Creek in the Brook Mine permit application. (MDK)

Response MK 41 – Round 2

Please refer to the added text at the bottom of the second paragraph of Section D6.1.5.3 summarizing the surface water quality in Hidden Water Creek for the Big Horn Mine surface water monitoring station, HWC1-79. In addition, Table D6.1-15 has been constructed which displays concentrations of the nine samples collected for the 1979 through 1989 period of record. The approximate location of HWC1-79 has been added to Exhibit D6.1-2.

Comment MK 41 – Round 3

Response accepted.

Comment MK 42 – Round 1

Appendix D6-Hydrology, Section D6.1.5.4 Sediment Transport, 16. This section would be enhanced by including data from a single sediment sample collected on Slater Creek at USGS Station No. 06299900 (peak flow gage previously discussed in Comment No. 4). This sample was collected in June 1967 at a flow of 18 cfs. The TSS was 11,600 mg/L and the suspended sediment discharge was 564 tons/day. (MDK)

Response MK 42 – Round 1

The text has been revised to include the additional sediment sample as requested.

Comment MK 42 – Round 2

No comment received.

Response MK 42 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 43 – Round 1

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 17. A rating curve developed using only the Manning equation will provide only a rough estimate of flows given the uncertainty in the Manning's roughness coefficient. It is recommended that direct discharge measurements also be taken over time to help evaluate the rating curves developed for the four monitoring sites. (MDK)

Response MK 43 – Round 1

The rating curves were developed for ephemeral streams that flow infrequently enough that water measurements cannot be taken at regular intervals. Manning's equation provides a reasonable and widely accepted mathematic approximation of stream flow rates.

Comment MK 43 – Round 2

Response not accepted. Developing a rating curve for an open channel using only Manning's equation and no direct measurements is not a standard practice. If a direct discharge measurement is not occasionally taken, the accuracy of the modelled rating curve will never be known. Please commit to periodically taking a direct measurement to evaluate the rating curves. (MDK)

Response MK 43 – Round 2

A commitment to obtain direct measurements of surface water monitoring stations, when possible, was added to Section MP.7.1.

Comment MK 43 – Round 3

Response not accepted. The text was updated but it is unclear what is going to be directly measured. For example, the text states: *In addition, direct measurements of surveyed cross sections will be obtained when possible.* It is not clear if the measurement will be of the water discharge or the cross section dimensions. Please revise the sentence so it is clear that direct discharge measurements will be taken when possible to evaluate the rating curves.(MDK)

Response MK 43 – Round 3

Section MP.7.1 has been revised to state that direct discharge measurements will be obtained when possible.

Comment MK 44 – Round 1

Appendix D6-Hydrology, Addendum D6-5 – Rating Curves, 18. Given the uncertainty in the Manning equation, the estimated flow rates provided in Table D6-3 and Attachment D6-5-A (Rating Tables) are reported at much too high a level of precision to be meaningful. Depending on the magnitude of the flow estimate, there should be only one or two significant figures provided. For example, 0.29 cfs = 0.3 cfs and 3,584.38 cfs = 3,600 cfs. Please revise these tables. (MDK)

Response MK 44 – Round 1

Summary Table D6-3 has been revised to engineering precision (no more than three significant figures). The values in Attachment D6-5-A are essentially raw data that are being reported to that magnitude to show the validity of calculations and to aid in curve development. Being raw data, the values were not revised from those previously reported.

Comment MK 44 – Round 2

No comment received.

Response MK 44 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 9 – Round 1

Appendix D6, Section D6.2.1 Regional Hydrogeology, 9. Page D6-12 states, "The potential groundwater in the formation as capable of yielding small quantities of water for domestic and stock use". Please consider providing a range of estimates for well yields based on literature review or from the baseline data collected by the Brook Mine. (MK)

Response Muk 9 – Round 1

The text has been revised to indicate that coal is the only regional shallow aquifer that has a sufficient quantity of water to support domestic and stock use.

Comment Muk 9 – Round 2

No comment received.

Response Muk 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 10 – Round 1

Appendix D6, Section D6.2.1 Regional Hydrogeology, 10. The description in this section discusses only about the Fort Union formation. Please provide a description of

the overlying and underlying water-bearing formations (aquifers) and describe their hydrogeologic characteristics (flow direction, gradients, aquifer properties, general outcrop locations) on a regional context. It is noted that some of the overlying formations may be dry or discontinuous within the mine permit boundary. (MK)

Response Muk 10 – Round 1

Section D6.2.1 has been updated as requested.

Comment Muk 10 – Round 2

No comment received.

Response Muk 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 11 – Round 1

Appendix D6, Section D6.2.1 Regional Hydrogeology, 11. Page D6-12 states, "The overburden is comprised of sand lenses, clinker and alluvial that have the potential of water bearing bodies. Due to the topography in this area, the valley cut through these deposits. Therefore, they are discontinuous and would not hold large quantities of water." It is noted that they are discontinuous and would not hold large quantities of water. Please provide additional justification for this statement by using the hydrogeologic data collected by the Brook Mine including any reference to the interpreted extent of dry zones based on drill holes, monitor wells and other applicable data. (MK)

Response Muk 11 – Round 1

Section D6.2.1.1 has been updated as requested.

Comment Muk 11 – Round 2

Response not accepted. In addition to a reference to Addendum D5-2, please provide a description/interpretation on the aerial and vertical extent of dry zones. (MK)

Response Muk 11 – Round 2

Discussion of the interpreted dry zones was added to the first paragraph of Section D6.2.1.1 (page D6-14). As discussed, the overburden is primarily dry as indicated by the lithologic logs in Appendix D5. A few boreholes did indicate the presence of water in the overburden; however, water was generally located in the shallow alluvium/colluvium material or in burn areas. These boreholes were generally located near streams or supporting tributaries throughout the permit area and adjacent areas.

Comment MuK 11 – Round 3

Response accepted.

Comment Muk 12 – Round 1

Appendix D6, Section D6.2.1 Regional Hydrogeology, 12. Please clarify if there were groundwater springs or seeps observed in the areas within or adjacent to the mine permit boundary. Include a discussion (or reference) on the surface water - groundwater interactions.(MK)

Response Muk 12 – Round 1

Section D6.2.2.5 has been updated as requested.

Comment Muk 12 – Round 2

No comment received.

Response Muk 12 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 13 – Round 1

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 13. Page D6-13 states, "No monitoring wells were completed in the overburden or interburden as no water was found in these units during drilling operations". This information is critical in demonstrating the overlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (both overburden and interburden) and their depths that were used to make this determination. (MK)

Response Muk 13 – Round 1

Section D6.2.2.1 has been updated as requested.

Comment Muk 13 – Round 2

No comment received.

Response Muk 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 14 – Round 1

Appendix D6, Section D6.2.2.1 Monitor Well Construction, Completion and Development, 14. Page D6-13 states, "Also one well 578409-MST-UB showed the presence of water in the underburden, while all the other wells drilled into the

underburden were dry and therefore not completed as wells." Similar to the previous comment, this information is critical in demonstrating the underlying units are dry. Therefore, for better documentation, please provide (or reference) a map with all the drill holes (underburden) and their depths that were used to make this determination. (MK)

Response Muk 14 – Round 1

Please see response to Muk 13.

Comment Muk 14 – Round 2

No comment received.

Response Muk 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 15 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 15. Page D6-15 states, "Alluvial materials were also not analyzed during the aquifer testing." The alluvial aquifer materials are one of the key factors in determining any impacts caused by mining to the alluvial aquifer. Alluvial aquifer tests will be helpful in understanding any surface water – groundwater interactions. Please provide justification for not conducting any aquifer tests in the alluvial wells. (MK)

Response Muk 15 – Round 1

The text in Section D6.2.2.2 has been updated.

Comment MuK 15 – Round 2

Response not accepted. The updated text just notes that there were three alluvial wells completed in Slater Creek. The original comment remains to be addressed. (MK)

Response MuK 15 – Round 2

A short discussion was added to the second paragraph of Section D6.2.2.2 after the context of the response to Comment MuK 16. The discussion explains that aquifer tests weren't conducted in the alluvial wells because of the confining claystone intervals between colluvial/alluvial material and the differences in potentiometric head between the Carney coal and the colluvial/alluvial material. Therefore, it can be surmised that the confining intervals will provide a suitable barrier between the mining activities and the colluvium/alluvium, not necessitating aquifer tests in the alluvial aquifer.

Comment MuK 15 – Round 3

Response not accepted. It is acknowledged that there is a potentiometric head difference between alluvium and Carney coal seam. Please clarify if this potentiometric head difference is an artifact caused by CBM dewatering. (MK)

Response MuK 15 – Round 3

It is unlikely that the potentiometric head difference between the alluvium and the Carney coal seam can be attributed to CBNG dewatering. The CBNG dewatering efforts have occurred approximately 2 miles away from the wells utilized for aquifer testing. Given the relatively low transmissivity of the coal it is unlikely that the CBNG dewatering efforts have significantly affected water levels in the wells utilized for the aquifer tests. The water levels measured in the Carney coal during the aquifer test demonstrate that the Carney coal is confined (see Addendum D6-8). If the drawdowns from CBNG dewatering were significant it is unlikely that the coal aquifer would still be confined. Discussion of the potentiometric head differences between alluvium and Carney coal as it relates to CBNG dewatering has been added to the end of the second paragraph in Section D6.2.2.2.

Comment MuK 16 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 16. Please provide justification for not observing the groundwater level responses in the alluvial aquifer during the two aquifer tests conducted by Brook mine. (MK)

Response MuK 16 – Round 1

No alluvial material was present in immediate vicinity of the clusters used for the pumping tests, hence there was no alluvial aquifer to monitor. Hidden Water Creek located to the east of the tested well cluster would be potentially the nearest location of alluvial material. However, as noted in Appendix D11, the fill material in Hidden Water Creek is more colluvial than alluvial.

In addition, as shown on the well completion summary logs in Addendum D6-7, multiple claystone intervals are located between the Carney Coal and the surface at the well cluster where the pumping tests were conducted. The top of the Carney Coal is approximately 90 feet below ground surface at the cluster well location which is approximately 50 feet below the level of any colluvial/alluvial deposits in Hidden Water Creek. Similarly, the potentiometric head in the Carney coal is some 50 feet below the level of the colluvial/alluvial deposits in Hidden Water Creek and if there were a direct hydraulic connection, there would be no water in the Hidden Water Creek colluvium/alluvium. Given the confining intervals between and the significant difference in potentiometric head between the Carney Coal and the Hidden Water Creek colluvium/alluvium, additional shallow monitoring above the Carney Coal was not necessary.

Comment Muk 16 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Response Muk 16 – Round 2

The context of the response was added to the second paragraph of Section D6.2.2.2.

Comment MuK 16 – Round 3

Response accepted.

Comment Muk 17 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 17. Page D6-16 states, "A report of these tests can be found in Addendum D6-8 and summary tabulation of the aquifer test results is included in Table D6.2.2". Please consider including a comparison of these estimated aquifer properties with the aquifer tests conducted in other similar coal seams in the Powder River Basin (Example: Bighorn Mine). Given the number of tests conducted by the mine, this will increase the robustness of the reported estimates from the two aquifer tests. (MK)

Response Muk 17 – Round 1

As requested aquifer test results from Big Horn Coal Company and from the Youngs Creek Mine were added to the text.

Comment Muk 17 – Round 2

No comment received.

Response Muk 17 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 18 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, It is noted that the aquifer tests were conducted for ~640 minutes. Will an increased aquifer test duration change the observed lack of interaction between the coal seams and the underburden? Please clarify with a brief description. (MK)

Response Muk 18 – Round 1

Given the head differences between the static water levels in the Carney Coal, Masters Coal, and the underburden it is unlikely that additional pumping would have resulted in any impacts to the water levels in the underburden. As shown on Table D6-2, (page Addendum D6-8-13) the initial water level in the Carney Coal was approximately 11.5 feet higher than the water level in the Masters Coal and the initial water level in the

Masters Coal was approximately 9 feet higher than the initial water level in the underburden well. If there were a hydrologic connection between the aquifers, it is likely that the water levels in the aquifers would have already come into equilibrium.

Comment Muk 18 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Response Muk 18 – Round 2

The context of the response has been added as the third paragraph of Section D6-8.3.2.3 of Addendum D6-8 "Pumping Test Report." The context of the response seems to be better suited in the Pumping Test Report than in Section D6.2.2.2 of Appendix D6.

Comment MuK 18 – Round 3

Response accepted.

Comment Muk 19 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 19. The referenced Addendum D6-8, Table D6-2 shows an increase in water levels in two of the Carney coal seam observation wells during the Masters coal seam well pumping test. Please provide an explanation for this increase in water levels during the aquifer test. (Noordbergum effect?). (MK)

Response Muk 19 – Round 1

Upon review of the raw data collected during the pumping test it was noted that the drawdowns reported in Tables D6-2 and D6-3 were incorrectly reported. Replacement tables are included with this round of comment responses. As shown on the updated version of Table D6-2, the water level in both Carney observation wells (CRN-1 and CRN-OB) increased by 0.23 feet during the Masters coal pumping test. While the Noordbergum effect or other natural phenomena such as earth tides could have potentially influenced the water levels in adjacent aquifers during the pumping test, the increase in water levels can be largely attributed to barometric pressure changes. Water levels in the Carney observation wells were monitored using hand held electric lines and there were no adjustments for barometric pressure reported in Table D6-2. No site specific barometric data was collected during the pumping test period. However, to evaluate how barometric pressure changes may have impacted water levels in the wells, barometric data from the automatic weather observing station (AWOS) at the Sheridan County airport was obtained from the National Oceanic and Atmospheric Administration (NOAA) database. Barometric data from the Sheridan County Airport AWOS site was compared to water level measurements in Attachment D6-8-K. The data in Attachment D6-8-K demonstrates a clear correlation between barometric pressure and water level variations in the Carney coal monitor wells during

the Masters coal pumping test. Generally over the course of the Masters coal pumping test the barometric pressure went down (roughly 0.31 feet). A decrease in the barometric pressure is expected to result in an increase in water levels in a confined aquifer like the Carney coal aquifer which is what was observed.

Similar increases in water levels were also noted in the Masters Coal observation wells (MST-1 and MST-OB) during the Carney pumping test as noted on Table D6-3. Attachment D6-8-K demonstrates a clear correlation between decreasing barometric pressure and rising water levels in the Masters coal observation wells during the Carney Pumping test. In addition, during the Carney coal pumping test, water levels in the Masters coal observation wells were still recovering from drawdowns induced during the Masters coal pumping test which may also have contributed to rising water levels in the Masters coal. The increase in water level measured in the Masters coal observation wells is attributed to a combination of continuing water level recovery and barometric effects.

Only very minor water level variations in the Masters underburden well (MST-UB) were noted during both pumping tests. As shown on the well completion form in Addendum D6-7, (Page D6-7-8) MST-UB was completed in an interval that was predominately claystone and the estimated yield is less than 2 gpm. Essentially the strata in which MST-UB is completed is more of an aquitard than an aquifer. As a result, it takes a lot longer for the water levels in the well to adjust to changing atmospheric pressure because water does not enter or discharge from the formation very fast. The lack of barometric responses in the MST-UB are attributed to the fact that the low yielding aquitard in which the well is completed has a lower barometric efficiency than the wells completed in the coal aquifers.

Vented transducers utilized to monitor water levels in the both the pumping and adjacent monitor wells during each pumping test, automatically compensated for the barometric pressure effects. Therefore, barometric pressure effects did not affect the aquifer analyses that were developed based on the pumping test data.

Comment Muk 19 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Response Muk 19 – Round 2

The context of the response has been added to Section D6-8.3.2.3 of Addendum D6-8 "Pumping Test Report." The context of the response seemed to be better suited within the Pumping Test Report than Section D6.2.2.2 of Appendix D6.

Comment MuK 19 – Round 3

Response accepted.

Comment Muk 20 – Round 1

Appendix D6, Section D6.2.2.2 Aquifer Tests, 20. Please provide a discussion (or reference) on the role of faults in the results of aquifer tests. (MK)

Response Muk 20 – Round 1

As noted in Addendum D6-8, (page D6-8-9) no hydrologic boundary conditions were observed in the pumping test data. As can be seen on Exhibit D6.2-2, the 578409 well cluster is located approximately 2,100 feet south and east of the nearest mapped fault. Since neither the Carney nor the Masters coal seams are very robust aquifers and have low transmissivity values, it is not surprising that the fault would not influence the pumping test results. For example, using Theis drawdown equations and the aquifer characteristics measured in the Masters coal (transmissivity of 3.2 ft^2/day, storativity of 0.00025, and a pumping rate of 0.5 gpm) it is estimated that it would take over 70 days of continuous pumping for a water level response greater than 0.5ft to be observed 2,000 feet away. Therefore the likelihood that the faults would have influenced the pumping test results is very low.

Comment Muk 20 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application. (MK)

Response Muk 20 – Round 2

The context of the response has been added to Section D6-8.4 of Addendum D6-8 "Pumping Test Report." This seemed like a more appropriate location for the context of the response than within Section D6.2.2.2 of Appendix D6.

Comment MuK 20 – Round 3

Response accepted.

Comment Muk 21 – Round 1

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 21. Please provide some additional discussion on the premining potentiometric surface maps, including ranges of estimated hydraulic gradients and groundwater velocity in the different coal seams/aquifers. (MK)

Response Muk 21 – Round 1

As requested, additional discussion on the hydraulic gradients and groundwater velocity in the coal seams were added to Section D6.2.2.4.

Comment Muk 21 – Round 2

Response not accepted. The revised text states, "Groundwater gradients are low ranging from approximately 2 – 4 ft/year in the Masters Coal and 1 to 2.5 ft/year in the Carney Coal." Please correct the sentence to reflect velocities. (MK)

Response Muk 21 – Round 2

The text in Section D6.2.2.4, second paragraph was revised to correctly refer to 2 to 4 ft/year and 1 to 2.5 ft/ year as velocities rather than gradients.

Comment MuK 21 – Round 3

Response accepted.

Comment Muk 22 – Round 1

Appendix D6, Section D6.2.2.4 Premining Potentiometric Surface, 22. Please provide a discussion (or reference) on the hydrologic effects of any adjacent operations (including past coal mining activity by historic mines and Bighorn mine) on the premining information and data. (MK)

Response Muk 22 – Round 1

The last paragraph in Section D6.2.2.4 describes how CBNG production has affected water levels in the eastern side of the permit area. The drawdowns resulting from CBNG production have occurred since any historic coal mining activity and have superseded any drawdowns that may have occurred due to historic mining. Therefore, no lingering hydrologic effects from past coal mining activities are present. The text in the last paragraph in Section D6.2.2.4 has been updated to describe how CBNG impacts have superseded any impacts from historic coal mining activities.

Comment Muk 22 – Round 2

No comment received.

Response Muk 22 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 23 – Round 1

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 23. This section provides a good discussion on the recharge areas. However, please clarify if there are any discharges from the coal seams within the permit boundary. (MK)

Response Muk 23 – Round 1

Within the permit boundary there are no discharges from the coal seams with the possible exception of the Carney coal on the far west side of the permit area. As shown on Exhibit D6.2-3, the Carney coal outcrops in the far western side of the permit area along the ridge tops but has been eroded away in the stream valleys. As a result, the Carney coal is perched with no real source of recharge and is generally dry. However, on the down dip side of the outcrop the coal may discharge within the permit if there is water in the coal seam to discharge. As shown on Figures MP-3-4.7-1 and MP-3-4.7-2 it was determined during the groundwater modeling efforts that most of the Carney coal within the far western side of the permit area was dry. Therefore, there is minimal (if any) discharge from the Carney coal within the permit area. Section D6.2.2.5 has been updated to clarify where discharges from coal seams may occur within the permit boundary.

Comment Muk 23 – Round 2

No comment received.

Response Muk 23 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 24 – Round 1

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 24. Please provide a range of estimates for recharge from precipitation to the aquifers within the permit boundary. Also, provide a discussion if this is the primary recharge mechanism for the aquifers within the permit boundary. (MK)

Response Muk 24 – Round 1

The estimated recharge rates from precipitation are summarized in Section 4.2.2 of Addendum MP-3. Addendum MP-3 describes recharge within the permit area in more detail than Section D6.2.2.5. A reference to MP-3 was added in Section D6.2.2.5.

Comment Muk 24 – Round 2

No comment received.

Response Muk 24 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 25 – Round 1

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 25. Consider providing a description of the soil properties within the permit boundary and the use of these percent soil distributions in the discussion of infiltration within the permit boundary. (MK)

Response Muk 25 – Round 1

The soil properties within the permit boundary are described in detail within Appendix D7. While different soil types are expected to have variable infiltration rates, the only infiltration rate that is significant for the coal aquifers is the infiltration rate assigned to the strata near the outcrop of the coal seams. Throughout the permit area the strata overlying the coal aquifer are generally dry. Therefore the primary source of recharge occurs at the outcrops. Scoria, in particular, plays a significant role in recharge of the coal seams because it usually occurs near the coal outcrop. Because of its highly permeable characteristics most of the precipitation that falls on the scoria infiltrates into the scoria where it either infiltrates into the coal or discharges along a seep line at the base of the scoria. As noted in the response to BJ Kristiansen's comment number 57, ash material between the base of the scoria and the coal seams sometimes limits how much of the water in the scoria actually comes into direct contact with the coal. Nevertheless, because a large percentage of precipitation falling on the scoria actually infiltrates into it, the scoria does provide a consistent water source for recharge into the coal outcrops. As noted in Addendum MP-3 Section 4.2.2 the scoria areas were delineated and assigned their own recharge zone because they do play a significant role in recharging the coal seams. Within the permit area, there are several locations where the coal seams outcrop as well. These outcrop areas were also assigned their own recharge zone because they also have a hydrologic connection to the coals. Since the strata overlying the coal seams to be mined in the Brook Mine are generally dry, the recharge component from the overburden to the coal is very low away from the outcrop areas. Because of the limited hydrologic interaction between the recharge at the surface and the coal in areas away from the outcrop, site specific changes in the recharge rates based on soil type will not impact the coal aquifers. For this reason additional analysis of the infiltration properties of the soils within the permit area represents a level of detail that is not necessary to describe the hydrologic impacts to the coal aquifers from the proposed mining operations.

Comment Muk 25 – Round 2

Response conditionally accepted. Please incorporate the response into the permit application to document the justification for not including additional analysis on infiltration. (MK)

Response Muk 25 – Round 2

The context of the response has been added as the second paragraph of Section D6.2.2.5 of Appendix D6.

Comment MuK 25 – Round 3

Response accepted.

Comment Muk 26 – Round 1

Appendix D6, Section D6.2.2.5 Recharge and Discharge Areas, 26. Page D6-18 states, "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-8". Please revise this statement to reference the correct addendum - Addendum D6-9. (MK)

Response Muk 26 – Round 1

The text has been updated to read "Collected groundwater elevation and hydrographs of the groundwater wells are found in Addendum D6-9".

Comment Muk 26 – Round 2

No comment received.

Response Muk 26 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 27 – Round 1

Appendix D6, Section D6.2.3 Baseline Water Quality, 27. Page D6-20 states, "A piper diagram of the groundwater wells with measured values is presented in Figure D6.2-1. Please provide a discussion on the water quality types observed at each aquifer (Example: Is the water quality type variable within an aquifer? If yes, explain the potential reasons for this observed variability) based on the piper diagram. (MK)

Response Muk 27 – Round 1

Section D6.2.3 has been updated as requested.

Comment Muk 27 – Round 2

No comment received.

Response Muk 27 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 28 – Round 1

Appendix D6, Section D6.2.3 Baseline Water Quality, 28. Page D6-20 states, "The constituents that most frequently exceed the standard concentration limitations are ammonia, TDS, sulfate and manganese". Please clarify if these constituents exceed the Chapter 8 standards at *all* the monitor wells. (MK)

Response Muk 28 – Round 1

Please refer to the Tables D6.2-8 thru D6.2-17 for exceedances of water quality based on Chapter 8 standards. Based on the tables, the concentrations are not exceeded at all monitor wells. No text edits were made in response to this comment.

Comment Muk 28 – Round 2

No comment received.

Response Muk 28 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment Muk 29 – Round 1

Appendix D6, Section D6.2.4 Groundwater Rights, 29. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Cheyenne copy of the TFN does not have a sheet separator and a tab for Appendix E2 in the Adjudication volume. Please provide a sheet separator and tab for Appendix E2. (MK)

Response Muk 29 – Round 1

Refer to Comment DM3. Groundwater rights are provided in Appendix B of the Adjudication Volume. This text edit has been made in Section D6.2.4.

Comment Muk 29 – Round 2

Response not accepted. The response indicates Appendix B and the updated text indicated Appendix B2. Please clarify if that is Appendix B or Appendix B2. (MK)

Response Muk 29 – Round 2

The text in Section D6.2.4 was corrected to reference Appendix B as opposed to Appendix B2.

Comment MuK 29 – Round 3

Response accepted.

Comment Muk 30 – Round 1

Appendix D6, Section D6.2.4 Groundwater Rights, 30. Page D6-20 states, "Adjacent and on-site groundwater rights are listed in Appendix E2 in the Adjudication Volume." Please provide a summary discussion/statistics on (i) total number of water rights, (ii) number of wells, (iii) aquifer, (iv) permitted water use and other relevant summary statistics. (MK)

Response Muk 30 – Round 1

Groundwater rights are listed in Appendix B of the Adjudication Volume. All of the aforementioned information is listed for each water right. Due to the constantly changing nature of water rights, a summary table is difficult to construct, and due to summary statistics not being required by WDEQ regulation, a summary statistics table has not been prepared.

Comment Muk 30 – Round 2

Response not accepted. It is acknowledged and noted that water rights vary with time. The intent of this comment is to request a summary of the raw data on the water rights presented in Appendix B, which is a snapshot in time before the approval of the proposed operations. It will enable the reviewers to get a clear understanding of the existing groundwater water uses and if there is a significant dependence on the affected aquifers. In addition, it is very useful information for the CHIA to provide a summary on the groundwater hydrologic concerns within the impact area. Please summarize (i) total number of water rights, (ii) number of wells (iii) wells grouped by aquifer and (iv) permitted water use. Example: Sum the total number of wells, provide a description on the percent of different types of uses. (MK)

Response Muk 30 – Round 2

A summary table (Table D6.2-18) has been added to Appendix D6. Text referencing this table has been added to Section D6.2.4, as well as text referencing discussion of impacted wells found in Addendum MP-3. Table D6.2-18 summarizes the total number wells not including cancelled, expired, abandoned, or suspended water rights. The table lists the permitted water use, the number of wells for each permitted water use, and the percent of total for each permitted use category. The table does not group the wells by aquifer. With nearly 500 wells being reported, the research required to determine the aquifer that each well is completed in would be exhaustive and, ultimately, not possible. Additionally, upon review of several of these water rights, one will note that most water rights have poor completion information. Water rights have either no lithology or have lithology that is so nondescript that a specific aquifer cannot be determined.

Comment MuK 30 – Round 3

Response accepted.

Comment Muk 31 – Round 1

Appendix D6, Section D6.2.4 Groundwater Rights, 31. Please provide a discussion (or reference) on the premine groundwater use (including the uses reported to SEO) within the permit boundary and the adjacent areas. (MK)

Response Muk 31 – Round 1

The premine groundwater uses as reported to the SEO within the permit boundary and the adjacent 3 miles are listed with each individual water right in Appendix B of the Adjudication Volume.

Comment Muk 31 – Round 2

Response not accepted. In addition to the reference to Appendix B, please include a textual description and summary of the premine groundwater use within the permit boundary and adjacent areas. (MK)

Response Muk 31 – Round 2

The text in Section D6.2.4 has been changed to include a discussion listing the predominant water uses in permit area and the adjacent 3-mile buffer. The text references the newly created Table D6.2-18 for a groundwater use summary.

Comment MuK 31 – Round 3

Response accepted.

Appendix D7

Comment DS 6 – Round 1

Appendix D7, Exhibit D7.3.-1 was compared with Exhibit MP.1-1. As required, it appears that the soil sampling was concentrated in areas where surface disturbance is to be expected. Please provide the contour interval on the soils map. For ease of review and to prevent misinterpretation, however, the map showing sampling locations should also clearly show the locations of proposed surface disturbances instead of providing these details on separate maps which may or may not present differing scale distances.

Response DS 6 – Round 1

The disturbance boundary can be found on Figure D7.1-1 and as the reviewer noted on Exhibit MP.1-1. No revision to exhibit D7.3-1 has occurred in response to this comment.

Comment DS 6 – Round 2

Response is not adequate. Please show the proposed surface disturbance locations on Exhibit D7.3.-1.

Response DS 6 – Round 2

Please refer to Comment DS 22 of the Mine Plan. Soil polygons have been added to Exhibit MP.4-2 integrating the disturbance boundary with the associated soil polygons. No revision to Exhibit D7.3-1 has occurred in response to this comment.

The reasoning behind this is to separate Mine Plan disturbance from baseline studies. It is RAMACO's opinion that baseline studies should only show those conditions prior to RAMACO's proposed operations. Additionally, when future revisions to the Mine Plan are potentially made, references to the Mine Plan in baseline studies could inadvertently be missed causing mistakes in the permit. However, RAMACO is open to showing baseline information within the Mine Plan for an easier evaluation of topsoil types stripped within the topsoil stripping areas.

Comment DS 6 – Round 3

No comment received.

Response DS 6 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 7 – Round 1

Appendix D7, Page D7-4. The second paragraph of this page contains text that should be deleted. It states "If for whatever reason overall sampling intensity…..was determined to not be enough, it is proposed that any additional sampling be deferred and included a stipulation of a future pre-stripping soil assessment program." The Mine Plan and Reclamation Plan soils handling and replacement is contingent on adequate baseline sampling of the proposed area that will be affected by mining operations (topsoil balance and stockpile location planning and bond calculation). Therefore, baseline sampling for soils must be adequate prior to approval of any permit application. Please remove the inappropriate language from the Appendix D7 text. If future changes to the Mine Plan require additional soil sampling the issue will be addressed at that time.

Response DS 7 – Round 1

As requested, the second sentence of the second paragraph on page D7-4 has been deleted.

Comment DS 7 – Round 2

No comment received.

Response DS 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 8 – Round 1

Appendix D7, Page D7-9. Text appears in this section that upon NRCS declaration of prime farmlands occurring in the permit area, a letter will be provided to the DEQ. A letter from the NRCS has been received and inserted in the permit declaring no prime farmlands to exist. The text, therefore, is not appropriate and should be removed.

Response DS 8 – Round 1

As requested, the sentence about prime farmland (the last sentence of the first full paragraph on page D7-9) has been deleted. A new reference, citing the letter received on October 31, 2015 (negative determination of prime farmland on Ramaco permit area) has been inserted on page D7-9 and the new reference has been added to the list of references on page D7-33.

Comment DS 8 – Round 2

No comment received.

Response DS 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 9 – Round 1

Appendix D7, WS § 35-11-415(b)(iii) and the Coal Rules, Chapter 4, Section (c)(ix) state that if topsoil is virtually nonexistent or is not capable of sustaining vegetation then subsoil or a selected spoil material may be used as a topsoil or subsoil supplement. Additionally, due to the proximity of this mine to the Tongue River, a Class 2AB stream, limits for chemical contaminants will be imposed on discharges from the permit. Therefore, for areas where unsuitable or marginal topsoil chemistry is located (e.g. Wibaux channery loam, sample R13), an alternative soil replacement material should be identified and used in reclamation. Such a commitment must also be provided in the Mine Plan and Reclamation Plan to provide evidence that such issues that could affect the condition of reclamation and/or lead to off-site impacts will be addressed.

Response DS 9 – Round 1

No "alternate soil replacement material" is necessary for areas of Wibaux channery loam (Map Unit Wx). The lower soil material below 8 inches of Wibaux (any "C" horizon soil substratum below 8 inches, where existent) was not recommended for salvage and would be grouped with the overburden spoil for placement purposes. This lower material had an excessive volume of hard coarse fragments (>35%) and, based on one of the three Wibaux sample sites (R13), an "unsuitable" EC and SAR value for the 8 to 15 inch depth, EC=12.8 and SAR=17.3. Two new sentences, indicating no soil salvage of Wibaux below 8 inches in depth, has been added to the soils report on page D7-26, one sentence each for Map Unit Wx and Map Unit Wx-RO. Furthermore, the amount of suitable soil available for salvage across the entire proposed disturbance area is not limiting, with a calculated weight-average of 20.2 inches. Therefore, additional "alternate soil replacement material" is not necessary.

Comment DS 9 – Round 2

No comment received.

Response DS 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 10 – Round 1

Appendix D7, The description of Map Unit G (Bauxson Loam, sample R-19) does not show marginal selenium that occurs between 22 – 48 inch depth range which could affect the salvage depth and may require special handling of the marginally suitable subsoil.

Response DS 10 – Round 1

Two new sentences have been added to the last paragraph on page D7-21 stating the presence of "marginal" rated Selenium values for lower material of Bauxson loam (Map Unit G) sample site R19. Strictly speaking, "marginal" rated soil material is not "unsuitable" and does not need to be specially handled. This lower Bauxson material has been recommended for salvage as "Subsoil", not "Topsoil'.

Comment DS 10 – Round 2

No comment received.

Response DS 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 31 – Round 2 (New Comment)

Section D7-2, Page D7-3 – A quotation and reference related to Schellinger, 2014, must be removed from the permit document as must all other quotations not supported by LQD documentation.

Response DS 31 – Round 2 (New Comment)

This quotation and reference is supported by LQD documentation. Please refer to Exhibit D7.2-1 of Appendix D7 which is a memorandum authored by David Schellinger, Soils Specialist on June 14, 2014. The quotation on page D7-3 accurately represents the sentence in the memorandum. Therefore, the quotation and reference remain in Appendix D7 as evidence for the extent of soil sampling in the Brook Mine permit area.

Comment DS 31 – Round 3 (New Comment)

Response is not adequate. The LQD Administrator has determined that LQD staff quotations not directly attributed to peer reviewed documents or documents signed by LQD staff should not be used in the text of permit documents; the quotes have no standing. The quotation of Mr. Schellinger, 2014, related to the survey required on affected areas where surface excavation would not occur must be removed.

Response DS 31 – Round 3 (New Comment)

The author of the citation has been revised to Wyoming Department of Environmental Quality (WDEQ-LQD). 2014b. However, the quotations and reference for the Memorandum to File remain in the text. As previously stated the quotation accurately represents the sentence in the memorandum as evidence for the extent of soil sampling in the Brook Mine permit area therefore the quotations will remain.

Appendix D8

Comment JJ 1 – Round 1

Appendix D8, 1. Please update the permit boundaries so that they are the same on Exhibit D8. 2-1 and Addendum D8 Map 1. I note specifically that lands should not be included within the permit boundary south of the interstate and that Section 10 TWN57N RNG85W displays different boundaries along the far west edge of the permit; it appears that the section lines are skewed between the two maps. The Addendum D8 Map 1 also is missing a sizeable amount of lands located in Section 21 TWN54N RNG84W which are included within the permit boundary of the Adjudication Exhibit 1 map. While comparing the maps I find that the maps display the same information in slightly different formats, please explain the necessity for two individual maps and at a minimum make them consistent against one another.

Response JJ 1 – Round 1

Baseline vegetation assessment maps have been updated to include the correct permit boundary. The discrepancy in the permit boundary is attributed to the difference in graphical representation between a USGS quad system and a PLSS system. The USGS quad system is now depicted. Exhibit D8.2-1 is a summary map for this Appendix and future updates made to this Appendix. This map will change throughout the life of the mine as future changes are incorporated. Addendum D8 Map 1 is for this Addendum and will not change throughout the life of the mine.

Comment JJ 1 – Round 2

The response is acceptable. The DEQ now understands the two separate maps and the boundaries now match.

Response JJ 1 – Round 2

Round 1 response is adequate. No response is necessary.

Comment JJ 2 – Round 1

Appendix D8, 2. Why does the study area not include all lands within the proposed permit boundary?

Response JJ 2 – Round 1

Portions of the proposed Brook Mine permit area not included within the study area were added during an October 2014 permit boundary change following completion of the baseline vegetation study. Additional studies were not conducted in these areas due to the limited size and similarity to areas within the study area. Section D8-1.1, page D8-1-5 text has been updated to explain the exclusion of these areas.

Comment JJ 2 – Round 2

The DEQ rules and regulations require vegetative characterization and baseline data for the entire permit area. Therefore, the lands located in Section 21, 22, and 15 that had not been previously included in the 2013 vegetation study area will require further attention. Please contact the DEQ to discuss the required baseline vegetation surveys. Due to the nature of the missing baseline vegetation data more comments may occur once all the data is submitted and applicable tables are updated.

Response JJ 2 – Round 2

The lands that are located in Sections 21, 22, and 15 that were not previously sampled in 2013 were sampled during 2015 quantitative baseline vegetation fieldwork. The data gathered for the areas in the above listed sections will be summarized for the WDEQ when the vegetation report is completed. The study area also needs to be

updated on both Exhibit D8.2-1 and Addendum D8 Map 1, and will be provided to WDEQ in a supplemental submittal.

Comment JJ 2 – Round 3

Comment remains open until the data is provided and reviewed.

Response JJ 2 – Round 3

Addendum D8-1 text and Addendum D8-1 Table D8-2 have been revised to include the additional areas for the Brook Mine Study Area. Exhibit D8.2-1 and Addendum D8-1 Map 1 have been revised to include the updated Brook Mine Study Area boundary.

Comment JJ 3 – Round 1

Appendix D8, 3. The acreage displayed on Table D8.2-1 should equal that of the land permitted on the Form 11. The Form 11 displays 4,548.8 acres while the table shows 4,581.7 acres a difference of 32.9 acres. Please update either the Form 11 or Table D8.2-1 to show the true permit acreage as it relates to the vegetation communities. Upon further review I find that Table D8-2 located on page Addendum D8-1-41 exhibits the proper acreages in relation to the Form 11, thus the values represented there may be more accurately displayed in Table D8.2-1.

Response JJ 3 – Round 1

Total acreage of the permit area is 4,548.8 acres as illustrated in Form 11 and Table D8-2. Table D8.2-1 has been updated to reflect the correct acreage.

Comment JJ 3 – Round 2

The response is acceptable.

Response JJ 3 – Round 2

Round 1 response is adequate. No response is necessary.

Comment JJ 4 – Round 1

Appendix D8, 4. Table D8.2-1 states there are 56 acres of agricultural lands; however, I am unable to locate Agricultural lands north of the interstate. Please, discuss and edit the values to display true acreages in relation to the proposed permit boundary. (See comment 3 for more clarification and another table for utilization to update values.)

Response JJ 4 – Round 1

Agricultural Lands within the permit area total 4.5 acres and are located in Section 21 TWN54N RNG84W. Table D8.2-1 has been updated to reflect the correct acreage of Agricultural Lands and other vegetation communities within the permit boundary.

Comment JJ 4 – Round 2

The response is acceptable.

Response JJ 4 – Round 2

Round 1 response is adequate. No response is necessary.

Comment SP 3 – Round 1

Appendix D-8 Vegetation Baseline, Page D8-3. Section D8.1.7. Guideline 2 is a non coal guideline. Please revise this sentence to reference the equation shown in Section D8-1.2.9 Sample Adequacy.

Response SP 3 – Round 1

Changed as requested. Additionally, Appendix D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8.1.1, page D8-1 and Section D8.3, page D8-4. Addendum D8 reference to Guideline 2 was replaced by reference for Chapter 2 in Section D8-1.2, page D8-1-5 and Section D8-1.9, page D8-1-38. Reference to Guideline 2 was removed from Section D8-1.2.9, page D8-1-12.

Comment SP 3 – Round 2

No comment received.

Response SP 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 3 – Round 3

The response is satisfactory. The references to Guideline 2 have been removed.

Comment SP 4 – Round 1

Appendix D-8 Vegetation Baseline, Page D8-4. Section D8.1.8. Please revise the second sentence to, "The EXREFA is all of the unaffected area for each native vegetation community."

Response SP 4 – Round 1

Changed as requested.

Comment SP 4 – Round 2

No comment received.

Response SP 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 4 – Round 3

The response is satisfactory. The term EXREFA has been incorporated.

Comment SP 5 – Round 1

Appendix D-8 Vegetation Baseline, Page D8-1-8. Section D8-1.2.4. The last sentence in this section states that no sample locations occurred within the Brook Mine Permit Area. AG-13, 14, 17 and 25 are shown on Addendum: D8, Map 1 inside the permit area. Please correct this statement or the permit boundary on the Map.

Response SP 5 – Round 1

Baseline vegetation assessment maps have been updated to include correct permit boundary which illustrates AG-13, 14,17, and 25 are not located within the permit boundary.

Comment SP 5 – Round 2

No comment received.

Response SP 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 5 – Round 3

The response is satisfactory. The permit boundary has been corrected so that no Agricultural transects fell within the permit boundary.

Comment SP 6 – Round 1

Appendix D-8 Vegetation Baseline, Page D8-1-11. Section D8-1.2.8. The last sentence of the first paragraph should be revised to, "Sample adequacy was not required for species diversity and composition."

Response SP 6 – Round 1

Changed as requested.

Comment SP 6 – Round 2

No comment received.

Response SP 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 6 – Round 3

The response is satisfactory. A sentence on sample adequacy for species diversity and composition has been revised.

Appendix D9

Comment DM 4 – Round 1

Appendix D9-Wildlife, Page D9-3 states that when a sage grouse confirmation letter is provided by WG&F, it will be provided to DEQ. It appears that the confirmation letter is already part of the package (Page D9-E3). Please reference the location of the letter.

Response DM 4 – Round 1

Page D9-3 was revised to reference Page D9-E3 as the location of the letter.

Comment DM 4 – Round 2

No comment received.

Response DM 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment WGF 1 – Round 1

(Appendix D9), We recommend this report become part of the annual reporting which will ensue throughout the operation of the mine.

Response WGF 1 – Round 1

Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the sections of the Mine Plan where the annual wildlife report commitments are contained.

Comment WGF 1 – Round 2

No comment received.

Response WGF 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment WGF 2 – Round 1

(Appendix D9), We suggest coordinating with the USFWS regarding raptor mitigation as needed through the mining process.

Response WGF 2 – Round 1

The commitments to coordinate with the USFWS regarding raptors as well as T&E and other species of federal concern are provided in Section MP.18, Addendum MP-8 and Addendum MP-9 of the Mine Plan. Discussion was added at the end of Addendum D9-1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references these discussions.

Comment WGF 2 – Round 2

No comment received.

Response WGF 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment WGF 3 – Round 1

(Appendix D9), We recommend mining reclamation practices consider providing suitable habitat for existing wildlife within the specifications required by DEQ-LQD.

Response WGF 3 – Round 1

The commitments to reclaim wildlife habitats are provided in the Reclamation Plan in Section RP.7 Wildlife Restoration. Discussion was added at the end of Addendum D9 - 1 Section D9-1.6 on Page Addendum D9-1-31 titled "Monitoring and Mitigation" that references the Reclamation Plan.

Comment WGF 3 – Round 2

No comment received.

Response WGF 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Appendix D10

Comment BJ 63 – Round 1

EXHIBITS, Addendum D10, The permit boundary layer on all of the exhibits covering the aquatic resource boundaries is incorrect. Please correct the permit boundary layers.

Response BJ 63 – Round 1

Aquatic resource inventory maps have been updated to include the correct permit boundary.

Comment BJ 63 – Round 2

No comment received.

Response BJ 63 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 5 – Round 1

Appendix D10-Wetlands, D10-1.4 – Please include a copy of the letter requesting concurrence and jurisdictional determination sent to the ACOE At the end of the text, and reference the letter in the text.

Response DM 5 – Round 1

BKS Environmental Associates, Inc., on behalf of RAMACO, requested concurrence and jurisdictional determination from the USACE on May 29, 2015. A copy of the letter sent to the USACE has been included as Attachment D10-F. Section D10-4, page D10-10 text has been updated to reflect submittal of USACE request.

Comment DM 5 – Round 2

No comment received.

Response DM 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 45 – Round 1

Appendix D10-Wetlands, Section D10.2 Results, 19. The text may want to state when (what date) RAMACO requested the jurisdictional determination from the USACE, and include this request letter as an Addendum to Appendix D10. This would provide documentation that the request was submitted, as receipt of the USACE determination may lag behind the LQD permitting process. (MDK)

Response MK 45 – Round 1

See response to DM5.

Comment MK 45 – Round 2

No comment received.

Response MK 45 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Appendix D11

Comment BJ 26 – Round 1

Appendix D11, Alluvial Valley Floor, Section D11.1, RAMACO has requested LQD to make a determination on the nature of the drainages as potential AVF within the permit boundary as well as within ½ mile of the permit boundary. This would then entail analysis of the following drainages (distances are approximations): • Hidden water Creek – all (4 mi.)

• East Fork Earley Creek – lower 1 mile

• Slater Creek – lower 3 miles

• Tongue River – ½ mi. east of Interstate 90 and 4 mi. west of Interstate 90 at the Acme exit.

Prior to such a declaration, LQD staff will have to perform a variety of assessments designed to assist us in making a declarative statement about AVF classification. An AVF declaration will be made after in-depth study of the drainages. Such investigation will consist of, but not be limited to:

1. Field evaluation of the geomorphic and lithologic character of the drainages in question;

2. Determination of the agricultural characteristics of the stream course;

3. Examination of available bore hole logs that can be used to characterize the subsurface materials beneath the valley floor;

4. Determination of groundwater and surface water characteristics, both quantitative and qualitative, within the drainages in question;

5. Other evaluation processes that may be deemed necessary should initial findings warrant further, in-depth analyses.

Response BJ 26 – Round 1

Revised D11 text throughout to expand discussion on the drainages mentioned above. Incorporated previous AVF studies into Appendix D11. Information satisfying each statement can be found in the following locations as well as many other locations throughout the document:

1. Borehole logs provided in Addendum D11-3. Hidden Water Creek test pits dug by Big Horn Mine and discussed in Section D11.3 “Stream Laid Deposits.”

2. Agricultural characteristics of the stream courses are discussed in Sections D11.4.2, D11.4.3, and D11.5, in particular.
3. Bore hole logs are provided in Addendum D11-3. Additional test pit and borehole information was analyzed from the Big Horn Mine Permit No. 213.
4. Groundwater and surface water characteristics are discussed extensively in Appendix D6. Potential impacts to surface water and groundwater are discussed in the Mine Plan. The water resources are generally discussed in Section D11.4.
5. Additional research has been incorporated from the Big Horn Mine Permit No. 213. Corrections and reevaluations of the AVF study have been made throughout Appendix D11.

Comment BJ 26 – Round 2

The response to the Round 1 comment is adequate. The original comment from round 1 was intended to create dialogue between Brook Mine Brook Mine and LQD:

> a) The first goal was to engender further discussion in the permit document covering baseline information regarding the nature of all potential AVFs within the permit boundary. The Round 1 Response effectively established a starting point for both LQD and Brook Mine.
>
> b) Now that there is a common foundation for all parties, field analysis and data studies can be initiated. This work needs to be scheduled.
>
> c) Brook Mine must provide written surface owner consent enabling LQD staff access to all acreages covered in the AVF determination analysis. This includes lands defined in Round 1, BJ comment 26, itemized stream lengths by stream name and distance.

Response BJ 26 – Round 2

A field analysis and data study of the potential AVFs within the permit boundary and adjacent areas was scheduled for September 24, 2015. RAMACO has provided LQD personnel with written surface owner consent enabling LQD staff to access acreages covered in the AVF determination analysis. No edits to the text were made in response to this comment.

Comment BJ 26 – Round 3

No comment received.

Response BJ 26 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment BJ 70 – Round 3

An AVF determination for Slater Creek has yet to be finalized. The site was visited by LQD staff on September 24, 2015 for the purpose of gathering field data for the future AVF determination. This determination is in the process of analysis of data and a decision will be issued by the beginning of 2016.

Response BJ 70 – Round 3

No response required. No changes were made in response to this comment.

Comment BJ 27 – Round 1

Appendix D11, Alluvial Valley Floor, Addendum D11-3, Some of the borehole and well logs indicate a damp or wet interval encountered during drilling. Was an attempt made to allow wet materials to produce water prior to continuation of the hole or was water noted after adding another drill steel and lowering the kelly to begin the next 20 feet of hole? Typically, after the steel has been added and the compressor is engaged, a small amount of water can be air-lifted before the rotary table begins to turn. If so, are there field notes indicating water was observed during the connection?

Response BJ 27 – Round 1

It is standard procedure during drilling operations to provide wet or damp intervals an opportunity to produce water. If the intervals had produced water, this would have been noted in the drilling logs provided in Addendum D11-3. There are no other separate field notes that would provide additional information. No changes to the text were made.

Comment BJ 27 – Round 2

No comment received.

Response BJ 27 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 1 – Round 1

Appendix D11-AVF, Section D11.1 Introduction, 1. In the second paragraph on Page D11-1, the possible impacts of the proposed mining operation on the Tongue River AVF are dismissed because the area is planned for facilities level disturbance only. However, the groundwater model (Mine Plan Addendum MP-3) predicts drawdown in the Tongue River alluvium, thereby possibly affecting the AVF. As discussed in subsequent comments, additional analysis and monitoring is needed to comply with LQD Coal Rules and Regulations regarding AVFs. (MDK)

Response MK 1 – Round 1

Revised text to reference Mine Plan Section MP.6 concerning the Brook Mine's effect on the Tongue River AVF.

Comment MK 1 – Round 2

Response not accepted. Mine Plan Section MP.6 does not explicitly mention or discuss the Tongue River AVF, or AVFs in general. Please provide a more thorough discussion in MP.6 on the possible effects of mining on the AVFs, particularly the Tongue River AVF with respect to drawdown in the Tongue River alluvium. Please also see the review of the response to Comment MK 21 below. (MDK)

Response MK 1 – Round 2

Discussion of the Tongue River and Goose Creek AVFs and their associated impacts has been added to the Mine Plan in Section MP.25. In addition, a reference to this section was added to Section D11.7 in Appendix D11 and Section MP.6 in the Mine Plan. As discussed in the text, no significant impacts to the alluvial valley floors within and adjacent to the permit area are expected as no mining is planned within these areas. Potential minor impacts that could occur is the insignificant loss of water due to temporary loss of flow from ephemeral tributaries contributing to the Tongue River and Slater Creek.

Comment MK 1 – Round 3

Response accepted.

Comment MK 2 – Round 1

Appendix D11-AVF, Section D11.2 Purpose and Scope, 2. On Page D11-2, please change "Wyoming Reclamation Act" to "Wyoming Environmental Quality Act". (MDK)

Response MK 2 – Round 1

Revised text to state "Wyoming Environmental Quality Act."

Comment MK 2 – Round 2

No comment received.

Response MK 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 3 – Round 1

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 3. For identification of unconsolidated stream laid deposits, LQD Guideline No. 9 (AVF) lists two items that may be used to positively identify unconsolidated streamlaid deposits: (1) channel

bars, splays, abandoned meanders, modern flood plains, or terraces, and (2) bedload or washload sediment deposited or transported in a nonbedrock channel bottom. Presumably, item (2) would be met at the streams identified within the AVF study area. However, the permit application does not address whether the channels contain geomorphic features from item (1). Please address in the text whether channel bars, splays, abandoned meanders, modern flood plains, or terraces are observed within the streams within the AVF study area. (MDK)

Response MK 3 – Round 1

Revised text to discuss the lack of channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs in the Hidden Water Creek, Slater Creek, East Fork Earley Creek, and Earley Creek valleys.

Comment MK 3 – Round 2

No comment received.

Response MK 3 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 4 – Round 1

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 4. On Page D11-5, the conclusion that the materials in Hidden Water Creek valley do not meet the definition of unconsolidated streamlaid deposits, is in conflict with the conclusion from the Big Horn Mine Permit. The Big Horn Mine Permit (Appendix D6, Pages D6-151 to D6-158) describes the evaluation of unconsolidated streamlaid deposits on lower Hidden Water Creek. The permit states: "The conclusion verified from the pit observations is that these deposits are unconsolidated and stream laid. Small isolated patches of colluvium or bedrock can be found throughout the alluvial deposits, but these characteristics do not exclude the deposit from being stream laid." Please evaluate the data and findings from the Big Horn Mine Permit before a conclusion is drawn about the absence of unconsolidated streamlaid deposits on Hidden Water Creek. (MDK)

Response MK 4 – Round 1

Revised text to discuss the findings of the Big Horn Mine from test pits in the Hidden Water Creek valley. Additionally, Exhibit D11.3-1 was revised to show the locations of the Big Horn Mine test pits in Hidden Water Creek in relation to both the Brook Mine permit area and the Big Horn Mine permit area. Added the Big Horn Mine Permit State Decision Document (SDD) 213-T2 to Addendum D11-2.

Comment MK 4 – Round 2

No comment received.

Response MK 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 5 – Round 1

Appendix D11-AVF, Section D11.3 Stream Laid Deposits, 5. The Big Horn Mine Permit also describes subirrigation and flood irrigation studies on lower Hidden Water Creek and concludes: "Due to the lack of subirrigation and extremely low potential for flood irrigation, Hidden Water Creek is not an alluvial valley floor." Although this is in the approved mine permit, it does not appear that an explicit AVF determination for Hidden Water Creek was ever issued by the LQD, and the AVF findings in the SDDs for the Big Horn Mine Permit do not mention Hidden Water Creek. The Brook Mine Permit application should incorporate these previous AVF studies on Hidden Water Creek into Appendix D11. (MDK)

Response MK 5 – Round 1

See response to comment MK 4. Additionally, while the Big Horn Mine State Decision Documents do not mention Hidden Water Creek, the SDD 213-T2 states that "No other drainages are of significant size or lack the stream laid deposits necessary to be an Alluvial Valley floor within the renewal and/or amendment areas." Hidden Water Creek is located within the renewal area and was not included within the originally declared AVF area. Although it was not mentioned by name, it has been declared not to be an AVF within the Big Horn Permit Area. This SDD has been added to Addendum D11-2 and discussion added to the text in Section D11.3.

Comment MK 5 – Round 2

No comment received.

Response MK 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 6 – Round 1

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 6. On Page D11-6 it is stated the three monitor wells were installed along the thalweg of Slater Creek. The transects in Exhibit D11.3-2 show that two of the wells (578513-AL and 578418-AL) are not along the thalweg but are rather upgradient of the channel. Please revise this description in the text. (MDK)

Response MK 6 – Round 1

Revised text to more accurately state that the monitor wells are along or near the thalweg.

Comment MK 6 – Round 2

No comment received.

Response MK 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 7 – Round 1

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 7. It appears that from Exhibit D11.1-1 that subirrigation is occurring on Earley Creek within the AVF study area. Please explain why subirrigation was not mapped on Earley Creek. (MDK)

Response MK 7 – Round 1

Revised Exhibit D11.1-1 to show potentially subirrigated lands on Earley Creek. The text was revised in Section D11.4.2 to reflect that subirrigation potentially occurs along Earley Creek.

Comment MK 7 – Round 2

No comment received.

Response MK 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 8 – Round 1

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 8. On Page D11-6, second paragraph, the alluvial/colluvial potentiometric surface is dismissed as a source of subirrigation along Slater Creek. However, the other hydrologic processes responsible for the subirrigation are not identified. Please discuss in the text why subirrigation is occurring along Slater Creek. (MDK)

Response MK 8 – Round 1

Revised text to discuss the presence of burn areas overlying residual coal ash bands that serve as aquacludes which prevent water from entering or escaping the coal below.

Comment MK 8 – Round 2

No comment received.

Response MK 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 9 – Round 1

Appendix D11-AVF, Section D11.4.2 Extent of Subirrigation, 9. The cross-sections in Exhibit D11-3-2 would be improved if the active channel and any floodplains or terraces were shown. A description of the materials in the active channel bottom would also help identify unconsolidated streamlaid deposits. (MDK)

Response MK 9 – Round 1

Revised Exhibit D11.3-2 to show the 2-year, 24-hour flood inundation area and the location of the active channel. Data regarding the materials in the active channel bottom are presented in the borehole logs in Addendum D11-3.

Comment MK 9 – Round 2

Response not accepted. The cross-sections were updated as requested but it is not clear if the materials from the borehole logs truly represent the active stream channel, as many of the borehole logs are shown to be tens to hundreds of feet away from the active channel. Please provide a description of the materials in the active channel bottom of both Hidden Water Creek and Slater Creek. (MDK)

Response MK 9 – Round 2

Borehole locations were chosen in areas that would represent the natural extent of the alluvium in the channel and those that could be accessed in order to obtain these boreholes. So while boreholes are located ten to a hundred feet off the natural channel in actuality, these areas are the closest location that could be physically accessed to obtain the boreholes due to the limitations of the drilling equipment. In addition, to ensure the boreholes were drilled in a location that was properly depicting the potential alluvial/colluvial material of the channel, the presence of scoria alluvial/colluvial material was used as an identifier. As exhibited in Addendum D11-3, scoria material was recorded in the majority of borehole logs. Text has been added to Section D11.3 regarding the selection of borehole locations.

Comment MK 9 – Round 3

Response accepted.

Comment MK 10 – Round 1

Exhibit D11.4-1, the extent of irrigated lands shown in Sections 2 and 11 along Slater Creek may not be correct. According to the summary for the Hart Brothers Ditches water right (permit 1317) in the SEO database, the land being irrigated under the water right has decreased to 23 acres:

> THIS FACILITY IS MADE UP OF TWO DITCHES. THE WEST DITCH HAVING A POINT OF DIVERSION IN LOT 2 AND THE EAST DITCH HAVING A POINT OF DIVERSION IN THE SENE OF SECTION 3, T57N, R85W. T57N, AND 58N, R85W

HAS BEEN DEPENDENTLY RESURVEYED. REQUEST FROM PADLOCK RANCH TO ELIMINATE 67 ACRES AS FOLLOWS: 32 ACRES IN THE SWSW OF SECTION 2 - 30 ACRES IN THE NENW AND 5 ACRES IN THE NWNW OF SECTION 11 ALL IN T57N, R85W, RECEIVED AND GRANTED. REQUEST OF ELIMINATION AND PROOF OF OWNERSHIP FILED IN MISCELLANEOUS NOTICES. ADJUDICATED WITH H.H. WILLIAMS AS APPROPRIATOR. PERMIT RECORD REFLECTS SOURCE AS SLATER CREEK AND WATER STORED IN THE HART BROTHERS RESERVOIR, P60R, XR7825A, HOWEVER CERTIFICATE RECORD REFLECTS .91 CFS FOR THE IRRIGATION OF 64 ACRES. BOC PETITION II 89-4-2 BY PADLOCK RANCH WAS GRANTED TO ISSUE AMENDED CERTIFICATE C77/290A TO REDESCRIBE LANDS WITHOUT CHANGING LAND TOTALS AND TO CHANGE POINT OF DIVERSION FROM THE RECORD POINT IN THE NWNE AND SENE OF SECTION 3, 57N, R85W AND PARTIAL MEANS OF CONVEYANCE FOR 41 ACRES (.59 CFS) TO THE WILLIAMS DITCH, P8710D, C77/289A DIVERTING WATER FROM SLATER CREEK IN THE SESW OF SECTION 34, T58N, R85W AS RECORDED IN ORDER RECORD BOOK 36, PAGES 385-390 AND RECEIVED ON CD3/578A. THIS LEAVES 23 ACRES STILL IRRIGATED UNDER THIS PERMIT. LANDS SHOWN BELOW AS "AME" AND "ELI" ARE THOSE ORIGINALLY DESCRIBED UNDER THIS DITCH.

Please clarify the irrigated acreage status for the Hart Brothers Ditches water right with the SEO and revise Exhibit D11.4-1 accordingly. (MDK)

Response MK 10 – Round 1

Exhibit D11.4-1 was revised to more accurately capture irrigated lands on Slater Creek in Sections 2 and 11 of Township 57 North, Range 85 West.

Comment MK 10 – Round 2

No comment received.

Response MK 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 11 – Round 1

Appendix D11-AVF, Section D11.4.4 Water Quality, 11. On Page D11-7, it is not necessary to mention the State of Montana water quality classifications of the Tongue River, as only State of Wyoming classifications and standards would apply. Please remove reference to the Montana standards. (MDK)

Response MK 11 – Round 1

Removed text referencing State of Montana water quality standards.

Comment MK 11 – Round 2

No comment received.

Response MK 11 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 12 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 12. On Page D11-8, second paragraph, it states that Exhibit D11.1-1 shows that sufficient water supply does not exist for consistent agricultural practices in East Fork Earley Creek. However, Exhibit D11.4.1 shows a point of diversion for Earley Creek Ditch No. 1 and several areas of irrigated lands less than 40 acres in East Fork Earley Creek. As documented in Addendum D11-4, there is an adjudicated water right for irrigation in this location. So there may be sufficient water supply for consistent agricultural practices. The text needs to further expand on this discussion of East Fork Earley Creek since there is an adjudicated water right for irrigation. (MDK)

Response MK 12 – Round 1

Revised text to include the Earley Creek Ditch No. 1 water right, but explained that subirrigation must not be prevalent in East Fork Earley Creek because no culvert or other conveyance structure is present beneath I-90. If subirrigation was prevalent and without a conveyance structure beneath I-90, substantial amounts of water would back up against the interstate.

Comment MK 12 – Round 2

Response not accepted. Please also add to the text any history available on the Early Creek Ditch No. 1 water right and the irrigation associated with the water right. I looked at several years of aerial imagery and it does not appear that any areas have been irrigated under this water right in recent times. I am able to view what appears to be the headgate and two ditches. It is possible that irrigation was abandoned long ago, which would support the contention that there is not sufficient water supply for consistent agricultural practices. Nonetheless, the water right remains fully adjudicated according to the SEO water rights database, so more discussion of this area is warranted in the text. (MDK)

Response MK 12 – Round 2

Text at the end of the second paragraph of Section D11.5 was added regarding the Earley Creek Ditch No.1. As presented in the text, based on CIR, imagery of the area, vegetation studies and absence of a conveyance structure under Interstate 90, the Earley Creek Ditch No.1 doesn't appear to have been used for irrigation purposes for some time.

Comment MK 12 – Round 3

Response accepted.

Comment MK 13 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 13. On Page D11-8, last paragraph, it states that the hay meadows along Slater Creek in Sections 2 and 11 are not within the boundaries of subirrigation or natural flood irrigation.

> (a) The areas symbolized as irrigated lands in Exhibit D11.4-1 do not necessarily correspond to hay meadows, as the imagery shows hay meadows in the SWNE, SENE, and NESE of Section 11, and the NWSW of Section 12. The hay meadows appear to correspond with the area mapped as "AG" in the Vegetation Map (Exhibit D8.2-1) in Addendum D8.
>
> (b) The irrigated area shown in Exhibit D11.4-1 near the Landen Ditch does overlap with subirrigation mapped in Exhibit D11.1-1.

Please re-evaluate the area of hay meadows along Slater Creek and revise the text accordingly. Comments No. 15 and 16 below also relate to this issue. (MDK)

Response MK 13 – Round 1

The text was revised in Section D11.5 to reflect the presence of limited hay meadows and overlapping of irrigation with subirrigation on the upper reaches of Slater Creek in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West. Exhibit D11.4-1 was revised to show irrigation in Sections 2, 3, 11, and 12 of Township 57 North, Range 85 West.

Comment MK 13 – Round 2

No comment received.

Response MK 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 14 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, On Page D11-8, last paragraph, it states that, besides Hart Bros Ditches, the remaining portion of the Slater Creek valley does not contain SEO water rights. This is not the case as Exhibit D11.4-1 shows Landen Ditch in the NENW of Section 11. This water right (P11695) does not appear in Addendum D11-4. Please revise the text and add this water right to Addendum D11-4. (MDK)

Response MK 14 – Round 1

The text was revised in Section D11.5 to discuss the Landen Ditch water right (P11695). A copy of the Landen Ditch water right was added to Addendum D11-4.

Comment MK 14 – Round 2

No comment received.

Response MK 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 15 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 15. The irrigated acreage for the Landen Ditch water right appears to be 18 acres for one point of use and 22 acres for a second point of use. Please add these areas to Exhibit D11.4-1. (MDK)

Response MK 15 – Round 1

Exhibit D11.4-1 was revised to more accurately reflect irrigated lands in the vicinity of the Landen Ditch.

Comment MK 15 – Round 2

No comment received.

Response MK 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 16 – Round 1

Appendix D11-AVF, Section D11.4.5 Agricultural Practices, 16. The Hall Ditch (SEO Permit 5195), mapped in Section 11 of Exhibit D11.4.1, apparently provides irrigation water for hayfields in the NESE of Section 11 (30 acres) and the NWSW of Section 12 (22 acres). This water right does not appear in Addendum D11-4. Please add this water right to the Addendum and add the irrigated acreages to Exhibit D11.4-1. (MDK)

Response MK 16 – Round 1

A copy of the Hall Ditch water right (SEO Permit 5195) was added to Addendum D11-4. Exhibit D11.4-1 was revised to depict irrigated lands in Section 12, Township 57 North, Range 85 West. The text in Section D11.5 was revised to discuss the Hall Ditch water right.

Comment MK 16 – Round 2

No comment received.

Response MK 16 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 17 – Round 1

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 17. Portions of Earley Creek and East Fork Earley Creek are within the AVF study area yet the permit application does not attempt to conclude if these streams contain AVFs. Presumably, the LQD will need to make an AVF finding on these streams. (MDK)

Response MK 17 – Round 1

See response to Comment BJ 26. Additional discussion has been added to aid WDEQ in the AVF findings of East Fork Earley Creek and Earley Creek. Both valleys are upstream of mining activities proposed by RAMACO such that no material damages are expected to either valley.

Comment MK 17 – Round 2

Response not accepted. Additional discussion was added for East Fork Earley Creek, but not Earley Creek. However, it is unclear from Comment BJ 26 if the LQD intends to make an AVF determination for Earley Creek. Additional response to this comment may be needed after checking with other LQD staff on whether or not a determination will be made for Earley Creek. (MDK)

Response MK 17 – Round 2

As discussed with LQD personnel, the majority of Earley Creek is outside of the permit area and ½ mile adjacent study boundary, however a small portion of the creek intersects the ½ mile study boundary in T.57N., R.84W. in the northwest quarter of Section 16 and southwest quarter of Section 9. These portions of land are outside of any planned surface disturbance and groundwater impacts to the area are not expected; therefore, a study of these lands was not included in Appendix D11. Discussion of Earley Creek will remain in Appendix D6. No changes to the D11 text were made in response to this comment.

Comment MK 17 – Round 3

Response accepted.

Comment MK 18 – Round 1

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 18. The first bullet for Slater Creek on Page D11-9 dismisses the positive identification of unconsolidated

stream laid deposits because a layer of colluvial material was found over alluvial material. However, as stated in Appendix D5 on Page D5-8 and Page D5-9, sub-rounding of the clinker present in the cuttings suggests water driven deposition of limited extent. Also, as discussed in Comment No. 3, the application did not evaluate unconsolidated streamlaid deposits in a manner that is consistent with identification criteria listed in LQD Guideline No. 9. The application has not provided sufficient evidence that unconsolidated stream laid deposits are not present along Slater Creek. (MDK)

Response MK 18 – Round 1

See response to Comment MK 3. The discussion on the Slater Creek valley has been further expanded to include the absence of unconsolidated stream laid deposits such as channel bars, splays, abandoned meanders, modern flood plains, and terraces that qualify for AVFs. Exhibit D11.3-1 clearly indicates the presence of undifferentiated alluvium and colluvium (Qac) in the Slater Creek valley.

Comment MK 18 – Round 2

No comment received.

Response MK 18 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 19 – Round 1

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 19. The third bullet on Page D11-9 for Slater Creek should be clarified that the width of natural flood irrigation in the valley is generally insufficient to provide for economic agricultural practices. However, economic agricultural practices clearly occur immediately upstream of the proposed mine permit boundary because of artificial flood irrigation of hayfields adjacent to the channel. These practices are documented by existing water rights that are approximately 100 years old. Please revise this discussion. (MDK)

Response MK 19 – Round 1

The text in Section D11.6 of Slater Creek's third bullet was revised to include the irrigated hayfield upstream of the permit boundary.

Comment MK 19 – Round 2

No comment received.

Response MK 19 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 20 – Round 1

Appendix D11-AVF, Section D11.6 Extent of Alluvial Valley Floor, 20. The fifth bullet for Hidden Water Creek on Page D11-9 seems to dismiss the positive identification of unconsolidated stream laid deposits because of colluvial material with shallow bedrock. However, as previously noted, this conflict with information in the Big Horn Mine permit concerning unconsolidated stream laid deposits on Hidden Water Creek. (MDK)

Response MK 20 – Round 1

Refer to response of Comment MK 4. The Big Horn Mine permit boundary has been added to Exhibit D11.1-1. The text in Section D11.6 has been updated to include a summary of the discussion stating that the Big Horn Coal Permit No. 213-T2 SDD determined the limits of the AVF, and no portion of Hidden Water Creek was determined as being AVF.

Comment MK 20 – Round 2

No comment received.

Response MK 20 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 21 – Round 1

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, Although the LQD has not yet issued its formal finding, the segment of the Tongue River adjacent to the proposed permit area, which was not declared under previous LQD findings, likely contains an AVF.

> (a) If this AVF is significant to farming, the applicant must comply with LQD Coal Rules and Regulations Chapter 3, Section 2(d)(ii) and demonstrate that the proposed mining operations will not materially damage the quantity and quality of water that supplies the Tongue River AVF. The absence of direct mining on the Tongue River AVF does not relieve the requirement of assessing the probable hydrologic impacts of the proposed operation to the AVF, particularly since the groundwater model in Mine Plan Addendum MP-3 predicts drawdown in the Tongue River alluvium. (MDK)
>
> (b) Regardless of the significance to farming, the applicant must also maintain and/or restore the essential hydrologic functions of the Tongue River AVF. The applicant must therefore identify the essential hydrologic functions of the Tongue River AVF and either (1) provide an analysis that the proposed operation will not hamper the essential hydrologic functions, or (2) demonstrate that the essential hydrologic functions will be restored. The essential

hydrologic functions for another part of the Tongue River AVF are described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27), so this may be a good starting point to consider. (MDK)

(c) A monitoring system is also required to demonstrate the essential hydrologic functions are maintained, as per LQD Coal Rules and Regulations, Chapter 5, Section 3(b)(ii). Since the groundwater model (Mine Plan Addendum MP-3) predicts 2.5 feet of drawdown in the Tongue River alluvium, the monitoring system may likely contain alluvial monitoring wells and periodic evaluation of color-infrared imagery. (MDK)

Response MK 21 – Round 1

Revised text as requested. Revised text by adding information regarding the essential hydrologic functions of the declared AVFs (Tongue River and Goose Creek) from the SDD in Addendum D11-2. Also, added portion of text to describe possible monitoring system and plan for the AVFs that may be affected.

Comment MK 21 – Round 2

Response not accepted. Please see the review of the response to Comment MK 1. Please provide a more specific reference to the section of the Mine Plan (MP.6) that discusses the probable hydrologic impacts to the Tongue River and Goose Creek AVFs. Please also prove a more specific reference to the appropriate portion of the Mine Plan or Reclamation Plan that provides further details on the AVF monitoring plan. (MDK)

Response MK 21 – Round 2

See comment MK 1-Round 2 response. Discussion of the AVF monitoring plan for the Tongue River has been added to the Mine Plan in Section MP.25 as well as the Reclamation Plan in Section RP.10. In addition, monitoring locations have been updated on Table MP.7-4, Exhibit MP.7-1 and Exhibit RP.8-5.

Comment MK 21 – Round 3

Response not accepted. With respect to the three proposed alluvial monitoring wells, please state in the text in Section MP.25 that these wells will be installed prior to commencing any mining-related disturbance.

Response MK 21 – Round 3

A statement that the alluvial monitoring wells along the Tongue River will be installed prior to mining related disturbance was added to the last paragraph in Section MP.25 of the Mine Plan.

Comment MK 22 – Round 1

Appendix D11-AVF, Section D11.7 Mining of Alluvial Valley Floor, 22. The essential hydrologic functions of the adjacent Goose Creek AVF must also be maintained during the proposed mining operation. The application needs to list these functions, as described in the Big Horn Mine Permit SDD (shown in Brook Mine Appendix D11 on Page Addendum D11-2-27). A monitoring system is also required to demonstrate that the essential hydrologic functions will be maintained. (MDK).

Response MK 22 – Round 1

See response to comment MK 21.

Comment MK 22 – Round 2

Response not accepted. The essential hydrologic functions of the Goose Creek AVF are listed, but the text does not explicitly address a monitoring system for the Goose Creek AVF, only the Tongue River AVF. Please commit to a similar monitoring system for the Goose Creek AVF to demonstrate that the essential hydrologic functions will be maintained. The text should also reference the appropriate portion of the Mine Plan or Reclamation Plan that provides further details on the AVF monitoring plan. (MDK)

Response MK 22 – Round 2

See comment MK 1-Round 2 response. Discussion of the AVF monitoring plan for Goose Creek has been added to the Mine Plan in Section MP.25 as well as the Reclamation Plan in Section RP.10. In addition, monitoring locations have been updated on Table MP.7-4, Exhibit MP.7-1 and Exhibit RP.8-5.

Comment MK 22 – Round 3

Response accepted.

Comment MK 104 – Round 2 (New Comment)

The permit application suggests that the Tongue River and Goose Creek contain AVFs. Appendix D-11 must therefore also include a discussion of the importance of these AVFs to farming, as discussed in LQD Guideline No. 9 (see Part IV, Section C). (MDK)

Response MK 104 – Round 2 (New Comment)

Text in Section D11.5 has been revised to discuss the importance of AVFs to farming.

Comment MK 104 – Round 3

Response conditionally accepted. The permit application has not provided the information discussed in LQD Guideline No. 9, Part IV, Section C for determining the importance of farming to the AVFs that presumably will be declared by the LQD on the Tongue River and Goose Creek. However as per Guideline No. 9, this information is

only required for "affected AVFs". The permit application implies that the AVFs on the Tongue River and Goose Creek should not be considered "affected AVFs" since farming would not be interrupted, discontinued, or precluded, and the essential hydrological functions of the AVFs would be preserved during mining. No mining is scheduled for these areas and the disturbance that is proposed appears to be minor enough such that essential hydrologic functions would not be affected. Therefore a significance to farming determination for these AVFs does not appear to be required. This may be subject to change pending other LQD staff input when the AVF determinations are made. (MDK)

Response MK 104 – Round 3

No response is required. No changes have occurred in response to this comment.

Comment MK 105 – Round 2 (New Comment)

Appendix D-11 (or perhaps Mine Plan MP.6) should also include a discussion of whether the proposed operation would interrupt, discontinue, or preclude agriculture use of the Tongue River and Goose Creek AVFs. This discussion should evaluate if the predicted drawdown in the Tongue River alluvium (Mine Plan Addendum MP-3) would result in any loss of agricultural use of the AVF. (MDK)

Response MK 105 – Round 2 (New Comment)

Text has been added to Mine Plan Section MP.25 to describe how agricultural use of the Tongue River and Goose Creek AVFs will not be precluded.

Comment MK 105 – Round 3

Response accepted.

Comment MK 121 – Round 3 (New Comment)

D11.5 Agricultural Practices. The CHIA site inspection report (Dated October 21, 2015 and mailed to Randall Atkins c/o WWC Engineering) discussed the abandoned Conable Reservoir and Ditch and Lateral system in Sections 12 and 13 within the proposed Brook Mine permit area. According to the SEO water rights database, a water right for Conable Reservoir was granted in 1901 (P223.0R). The purpose of the reservoir was to store water for irrigation of lands under the Conable Ditch and Lateral, which also held a water right to divert 1.46 cfs (P3088.0D). The water right allowed for using the water for irrigation of 100 acres of land adjacent to Slater Creek in T57N, R85W, Section 13. Both water rights were cancelled in 1906, and it is unknown the extent that the irrigation was ever developed. The dam for the reservoir has long since failed, allowing Slater Creek to flow freely through. In Section D11.5, please incorporate the history of the Conable Reservoir and Ditch and Lateral System, as this demonstrates there was a historical attempt to irrigate lands in the Slater

Creek valley within Section 13 of the proposed permit boundary. The attempt apparently failed and was abandoned and the water rights were cancelled. (MDK)

Response MK 121 – Round 3 (New Comment)

Discussion of the Conable Reservoir and Conable Ditch and Lateral were added as the fourth paragraph in Section D11.5.

Comment MK 122 – Round 3 (New Comment)

D11.7 Mining of the Alluvial Valley Floor. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D 11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP .5-l, which was updated for this round. Please include a statement in the text of Section D11.7 that there is some minor disturbance proposed within the AVF extent. Please also see Comments 7 (MK 126) and 8 (MK 127) below that request this be addressed in the relevant sections of the Mine Plan and Reclamation Plan. (MDK)

Response MK 122 – Round 3 (New Comment)

Minor disturbance is planned within the declared Big Horn Mine AVF extent in Section 21of Township 57 North, Range 84 West. Text discussing the minor disturbance has been added to the first paragraph of Section D11.7, as well as a reference to the applicable sections of the Mine Plan and Reclamation Plan for further discussion of the disturbed AVF.

Mine Plan

Comment BJ 28 – Round 1

Volume 11, Mine Plan, Section MP.1.2.1, pg. MP-4, Tunnel and pillar widths are discussed in general terms. Please approximate a range for the widths, in feet, in the narrative to give context to the discussion.

Response BJ 28 – Round 1

Added text as suggested.

Comment BJ 28 – Round 2

No comment received.

Response BJ 28 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 29 – Round 1

Volume 11, Mine Plan, The fifth sentence, beginning with "To minimize the amount of exposure..." does not make sense. Please rewrite the sentence for clarity.

Response BJ 29 – Round 1

Added text as suggested.

Comment BJ 29 – Round 2

No comment received.

Response BJ 29 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 30 – Round 1

Volume 11, Mine Plan, The narrative also references figure MP.1-3 as a general schematic of the highwall mining operation. The figure depicts significant vertical highwalls above the mining operation. The text mentions that the highwalls will be vertical where the Masters and Carney converge but the illustration depicts conditions where the coal seams appear to be separated by a considerable thickness of parting. It is our experience that vertical highwalls in the Powder River Basin are unstable and should be discourage wherever possible. What would the maximum thickness of burden approximate where the vertical highwalls will exist? Please include an average on the schematic as has been done for pit width and bench width.

Response BJ 30 – Round 1

The figure has been updated to include the average depths.

Comment BJ 30 – Round 2

No comment received.

Response BJ 30 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 31 – Round 1

Volume 11, Mine Plan, Pages MP-3 and MP-4, These pages describe the highwall mining operation in vague generalities. The narrative states that the continuous miner will advance into the working face to a depth of 2,000 feet. The manufacturer's specifications for the ADDCAR system state that the depth of a cut is 1,600 feet. Is this a discrepancy of 400 feet or is there a difference in mining tools and the ADDCAR system comes with multiple depth capacities. Please clarify.

Response BJ 31 – Round 1

Conversations with ADDCAR representatives indicates that they will be able to extend the range of the highwall mining system so cuts up to 2,000 feet can be achieved.

Comment BJ 31 – Round 2

No comment received.

Response BJ 31 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 32 – Round 1

Volume 11, Mine Plan, A general word of guidance – Ramps are mentioned in the narrative as designed to an 8% grade. The Cat 777 can generally handle this grade fairly well under most conditions. The Mack Titan trucks, however, may be problematic under certain conditions. Entering the pit on the ramp could be difficult for the Mack trucks with pups if the ramp has been watered to control dust. The overburden materials used for ramp systems are generally silty with a clay matrix and overwatering can create slipping hazards for vehicles. A truck with multiple trailers will have difficulty navigating these conditions. A 6% ramp under these situations is strongly advised.

Response BJ 32 – Round 1

Revised text as suggested.

Comment BJ 32 – Round 2

No comment received.

Response BJ 32 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 33 – Round 1

Volume 11, Mine Plan, The narrative describes the tunnel width as variable, depending on the cutting head chosen. Please indicate approximate footages of the tunnel widths. For example, Bucyrus and Joy manufacture continuous miners that have heads ranging from 11 to 12 feet in width. A mention of those widths would clarify the narrative. Also the protective coal pillars are described but have no dimensions indicated. The pillar width to tunnel width is crucial so an approximation of the remnant pillars width in feet is required. Please include approximate widths for tunnel and pillar widths.

Response BJ 33 – Round 1

See response to Comment BJ 28. The text has been updated as requested.

Comment BJ 33 – Round 2

No comment received.

Response BJ 33 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 34 – Round 1

Volume 11, Mine Plan, Section MP.1.2.2, The dozer push method of overburden removal is not adequately described. Though Figure MP.1-4 does depict the dozer push materials to some extent, the overlapping nature of the multiple lift system can be confusing to some. The narrative on page MP-4 is too brief. Please elaborate further on the dozer push staging and overburden removal. Perhaps an illustration that depicts the dozer removal in stages would be more appropriate. This can be accomplished by creating a series of illustrations rather than only one. Please clarify the methodology.

Response BJ 34 – Round 1

Revised text as requested. Created Figure MP.1-5.

Comment BJ 34 – Round 2

No comment received.

Response BJ 34 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 35 – Round 1

Volume 11, Mine Plan, Section MP.1.4, Pg. MP-5, The last sentence does not make sense. Please rewrite the sentence.

Response BJ 35 – Round 1

Removed last sentence for clarity.

Comment BJ 35 – Round 2

No comment received.

Response BJ 35 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 36 – Round 1

Volume 11, Mine Plan, Section MP.4.2.3, Pg. MP-15, The discussion of temporary topsoil stockpiles describes creating a ring ditch around the topsoil pile if there is a potential for water erosion during the 2 week to 6 month life of the pile. Since the climate is unpredictable and subject to rapid changes, temporary topsoil stockpiles (2 weeks to 6 months) will be required to have ring ditches in all cases with no qualifiers. LQD writes more violations concerning inadequate topsoil practices than any other issue. Rewrite the narrative to indicate that all temporary topsoil stockpiles will have a ring-ditch and berm created for piles having a life of 2 weeks or more. Keep in mind that even a short-lived topsoil stockpile could generate a violation if a sudden rainstorm were to erode the soil and waste it on the surrounding terrain. RAMACO may want to allow for this as well

Response BJ 36 – Round 1

Updated text as requested.

Comment BJ 36 – Round 2

No comment received.

Response BJ 36 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 37 – Round 1

Volume 11, Mine Plan, Section MP.4.3.4, Pg. Mp-17, A swell factor of 16% is being used to convert bank cubic yards to loose cubic yards. The number was generated from information attained from Big Horn Coal (PT213). Where was this information located? Many of the coal mines in the northwestern corner of the Powder River Basin use a swell factor of 13% - 14% since the overburden material is finer grained, with a higher clay content than mines on the eastern margin of the basin. Please cite the use of a 16% swell factor.

Response BJ 37 – Round 1

Revised text as requested. Table MP.4-9 provides typical swell and load factors of materials.

Comment BJ 37 – Round 2

No comment received.

Response BJ 37 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 38 – Round 1

Volume 11, Mine Plan, Section MP.6.1, Pg. MP-39, The second paragraph discusses surface runoff attenuation during mine years 4 and 5. The peak flow rates for precipitation events will be attenuated by the mining trenches that lie perpendicular to the flow in the local drainages. What flow events are expected to be attenuated by the trenches? Will the 2 year, 10 year, or 100 year events be considered as an average event? Please modify the narrative, in general terms, to define which precipitation event will be used when designing the pit drainage plans.

Response BJ 38 – Round 1

Updated text as requested.

Comment BJ 38 – Round 2

No comment received.

Response BJ 38 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 39 – Round 1

Volume 11, Mine Plan, Section MP.8, Pg. MP-47, The narrative mentions that potable water will be hauled to the mine an placed in a cistern. Why is a cistern system being considered for potable water instead of a reverse osmosis unit? The local residents use such systems as do the mines. How large of a cistern will be used for water storage? Please modify the narrative to expand on the rational behind using a cistern.

Response BJ 39 – Round 1

The text has been revised. The final potable water system has not been determined.

Comment BJ 39 – Round 2

No comment received.

Response BJ 39 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 40 – Round 1

Volume 11, Mine Plan, Section MP.9.9, Pg. MP-52, When pre-dug mud pits are to be used for exploration drilling, the topsoil must be protected from contamination by removal and stockpiling. The pit location must be stripped to the base of the soil with an areal extent that allows the pit materials to be stacked as spoil without encroaching on native surface. Reclamation shall occur in a manner that will best restore the surface to its pre-disturbance condition. These contingencies need to be

better described in the narrative. Please modify the text to reflect the aforementioned conditions.

Response BJ 40 – Round 1

Revised text as suggested.

Comment BJ 40 – Round 2

No comment received.

Response BJ 40 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 41 – Round 1

Volume 11, Mine Plan, Section MP.18, Pg. MP-68, The second paragraph discusses the speed limits that will be set on haulroads to protect wildlife. Approximately what speed limits will be used?

Response BJ 41 – Round 1

Updated text with a 45 MPH Speed Limit.

Comment BJ 41 – Round 2

No comment received.

Response BJ 41 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 42 – Round 1

Volume 11, Mine Plan, Section MP.20, Pg. MP-69, The brief description of underground mining should state that no "conventional" underground mining will occur. Highwall coal recovery is an underground mining technique, but no personnel work underground. Thus the mining is modified underground mining.

Response BJ 42 – Round 1

Revised text as requested.

Comment BJ 42 – Round 2

No comment received.

Response BJ 42 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 43 – Round 1

Volume 11, Mine Plan, Section MP.24, Pg. MP-70, The word "Operation" is misspelled in the title (OPERTATION).

Response BJ 43 – Round 1

Revised text as requested.

Comment BJ 43 – Round 2

No comment received.

Response BJ 43 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 44 – Round 1

Volume 11, Mine Plan, Section MP.25, Pg. MP-71, The second paragraph, third sentence, discusses requiring additional permitting. The word "additional" is misspelled (addidtional).

Response BJ 44 – Round 1

Revised text as requested.

Comment BJ 44 – Round 2

No comment received.

Response BJ 44 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 45 – Round 1

Volume 11, Mine Plan, TABLE MP.1-1, The total disturbance should read 895 acres, not 775. Please correct the table.

Response BJ 45 – Round 1

Revised text as requested.

Comment BJ 45 – Round 2

No comment received.

Response BJ 45 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 46 – Round 1

Volume 11, Mine Plan, FIGURE MP.1-3, The average width of the pit floor and safety bench have average widths indicated on the drawing. Please insert the average heights of the vertical highwalls in these situations.

Response BJ 46 – Round 1

Revised Figure MP.1-3 requested.

Comment BJ 46 – Round 2

No comment received.

Response BJ 46 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 47 – Round 1

Volume 11, Mine Plan, FIGURE MP.1-4, The cross section, as drawn, is confusing. It would appear that dozer pushed, loose material significantly exceeds the bank material available in the highwall. The figure is not drawn to scale but a more accurate attempt to represent dirt volumes would be appreciated. Also, the cross section itself does not make sense in the way that operational steps are illustrated. A series of cross sections over time would be much more beneficial to define the appearance of the dozer push. Please modify the figure accordingly. A sample of an idealized schematic is attached. It is volumetrically accurate.

Response BJ 47 – Round 1

Figure MP.1-4 has been updated to add clarity.

Comment BJ 47 – Round 2

No comment received.

Response BJ 47 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 48 – Round 1

Volume 11, Mine Plan, FIGURE MP.4-3, Pg. MP-F7, What is the narrow, vertical rectangle located in the center of the coal stockpile coming from the stacker?

Response BJ 48 – Round 1

The figure MP.4-3 has been updated to remove the rectangle.

Comment BJ 48 – Round 2

No comment received.

Response BJ 48 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 49 – Round 1

Volume 11, Mine Plan, Addendum MP-3, Pg. MP-3-2, The introductory paragraph states that the Brook Mine is approximately 6 miles northwest of Sheridan, Wyoming. However, in earlier narrative, the mine is said to be 6 miles south of the Montana border and 8 miles northwest of Sheridan. This passage is found in the Land Use Appendix D1-1. The distances should be uniform in all instances throughout the narrative.

Response BJ 49 – Round 1

Revised text as requested.

Comment BJ 49 – Round 2

No comment received.

Response BJ 49 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 50 – Round 1

Volume 11, Mine Plan, Addendum MP-3, Section 2.3, Figures 2.3-1 and 2.3-2 show the potentiometric surfaces for the Carney and Masters coal beds. The contours daylight and appear to be in mid-air over the Slater Creek drainage. Please adjust the contours so they terminate at the outcrop.

Response BJ 50 – Round 1

Revised Figures 2.3-1 and 2.3-2 in Addendum MP-3-17 as requested.

Comment BJ 50 – Round 2

No comment received.

Response BJ 50 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 51 – Round 1

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-3, The second to last paragraph indicates that the depth of the penetration by the continuous miner will be 2,000 feet. Is this an approximation since the listed depth for the ADDCAR device is 1,600 feet. Please clarify the discrepancy.

Response BJ 51 – Round 1

Based on communication with ADDCAR's representative 2,000 ft penetration is achievable. Generally, users of the ADDCAR system encounter increasing depth of cover with greater penetrations requiring wider web pillar between holes. The loss in recovery due to the wider pillars potentially negates any production gain from increased penetration.

Comment BJ 51 – Round 2

No comment received.

Response BJ 51 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 52 – Round 1

Volume 11, Mine Plan, Addendum MP-6, Section MP-6.1, Pg. MP-6-4, The discussion in this sections centers around the necessity of maintaining a straight, even cutting depth to prevent pillars from being cut too narrow to hold up the roof material and allow subsidence. The 1:1 ratio suggested by NIOSH is acceptable as long as roof strength tests bear up (no pun intended) the use of the general guidelines. A small sample of tests have been run on roof and coal rock intervals and those tests have been reported. LQD requests a narrative placed either in this location of the text or other location of RAMACO's choosing that discusses the strength tests results as it pertains to roof stability. Also, a commitment must be made in the document to sample roof material for strength testing for at least one location in every panel that will mined by the continuous miner prior to mining. Our concern rests with the competence of the overlying lithologies and their possibility for subsidence. This has been a problem in this area for decades and care must applied to characterize roof materials accurately.

A sampling plan to test compressive strength above each coal panel must be submitted prior to permit approval.

Response BJ 52 – Round 1

RAMACO must submit and have an approved MSHA Ground Control Plan that contains the strength test and commitments requested. RAMACO will provide this information when it is received and include it in the Subsidence Control Plan.

Comment BJ 52 – Round 2

No comment received.

Response BJ 52 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 53 – Round 1

Volume 11, Mine Plan, Addendum MP-6, Please provide the data used as input for the ARMPS-HWM program.

Response BJ 53 – Round 1

The following input values were used in the ARMPS-HWM program: compressive strength of coal - 660 psi, rock density - 162 lbs/ft3, abutment angle of 21°

Comment BJ 53 – Round 2

No comment received.

Response BJ 53 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 54 – Round 1

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-2, The scale of the photograph is too large to adequately depict the zones of surface subsidence from the old underground mines. Please blowup the scale to allow for clear visibility of the subsidence.

Response BJ 54 – Round 1

Cardno selected the larger scale to show that subsidence was limited to a small portion of the deep mine and not visible over other areas of the deep mine due its increased depth of cover. See revised figure in revision to Cardno's Subsidence Report

Comment BJ 54 – Round 2

No comment received.

Response BJ 54 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 55 – Round 1

Volume 11, Mine Plan, Addendum MP-6, FIGURE MP-6.2-3, This figure is very effective. It clearly shows the subsidence evident on the air photo as it correlates to

the old underground map superimposed on it. One problem, though, is that the air photo base needs to be darker, with greater contrast. The photo is a bit washed out and manipulation of the brightness/contrast aspects of the photo would help its visibility greatly. Please recalibrate the photo tonality.

Response BJ 55 – Round 1

See revised figure in revision to Cardno's Subsidence Report

Comment BJ 55 – Round 2

No comment received.

Response BJ 55 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 56 – Round 1

Volume 11, Mine Plan, Addendum MP-8, Section MP-8.5.4, The last sentence in this section indicates that there is no suitable habitat available for the Northern Long-Eared Bat. Does this include the climax Cottonwood Forest along Tongue River? The well developed understory along the river is suitable for Long-eared bat habitation though none have been located in this area. Or does the negation of the existence of the bat only apply to the area in the hills above the river where the mining will occur. Please clarify the area that was considered for potential Long-Eared Bat occurrence.

Response BJ 56 – Round 1

The text was revised to clarify.

Comment BJ 56 – Round 2

No comment received.

Response BJ 56 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 64 – Round 1

EXHIBITS, Mine Plan, Exhibit MP.1-1, The patterns used to depict surface disturbance from year to year are too similar. It is difficult to differentiate between year 0 and year 2, for example. Please recreate the surface disturbance layers to be more unique. The overburden removal sequence map (Exhibit MP.4-4) is a good example.

Response BJ 64 – Round 1

Revised Exhibit MP.1-1 as requested.

Comment BJ 64 – Round 2

No comment received.

Response BJ 64 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 67 – Round 2 (New Comment)

Mine Plan, Table MP.4-5., Overburden Stockpile Design –

The Estimated Capacity volumetrics for the Overburden stockpiles appear to be low. Based on a recalculation of the volumes given the acreage and average heights, each stockpile has a higher volume of capacity than which is shown in the table. A recalculated table would look like this:

Table MP.4-5. Overburden Stockpile Design

Stockpile Designation	Estimated Capacity **E** (cy)	Approximate Basal Area **A** (ac)	Average Height **H** (ft)	Calculated Capacity **C** (cy)[1]	Difference[2]
OB-1	300,000	4.7	55	417,047	117,047
OB-2	500,000	9.4	55	834,093	334,093
OB-3	950,000	13.4	95	1,189,027	239,027
OB-4	1,000,000	21.4	85	1,898,893	898,893
OB-5	730,000	9.2	70	816,347	86,347
OB-6	400,000	8.3	55	736,487	336,487
OB-7	400,000	8.9	70	789,727	389,727
OB-8	1,100,000	14.2	75	1,260,013	160,013
OB-9	510,000	8.7	55	771,980	261,980
OB-10	260,000	5.6	45	496,907	236,907
OB-11	100,000	4.1	50	363,807	263,807
OB-12	1,200,000	14.0	95	1,242,267	42,267
OB-13	165,000	4.2	45	372,680	207,680
OB-14	122,000	5.6	55	496,907	374,907
OB-15	76,000	3.2	30	283,947	207,947
OB-16	104,000	3.6	20	319,440	215,440
	7,917,000			12,289,567	4,372,567

[1]Calculated Capacity C = ((A*43560)*H)/27
[2]Difference = C-E

Based on the Recreated Table, Volumes derived from acreage and average height formulas give values that are approximately 35% too low. Please reevaluate the table in light of the mathematical calculations. Or, if there are extenuating circumstances that help create the overburden volumes in column B, please explain the seeming inconsistency.

Response BJ 67 – Round 2 (New Comment)

The capacities of the overburden stockpiles calculated by WDEQ do not account for the sideslopes of the overburden stockpiles. The calculations are appropriate for rectangular prisms with a uniform rectangular cross section. This explains why the calculations area significantly higher. The reported volumes by RAMACO are outputs from AutoCAD which uses 3D surfaces to construct stockpiles and calculate volumes. AutoCAD also takes into account the variation in a topographical surface that the stockpiles are placed on, which can affect the extent of the basal area and the average height. The volumes of the stockpiles were also rounded up to be conservative in the reported volumes. The average height is only a rough approximation because the height will change considerably depending upon the topographic surface beneath each pile. No changes have been made to the volumes of overburden. However, Table MP.4-5 has been revised to indicate sideslope angles and that the volumes have been computed using AutoCAD.

Comment BJ 67 – Round 3

No comment received.

Response BJ 67 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment BJ 69 – Round 3 (New Comment)

The new haulroad design appears to be missing a haulroad for the first pit to be mined, in sec. 22 T.57N., R.84W. Is this an oversight or has a haulroad not yet been designed?

Response BJ 69 – Round 3 (New Comment)

A haulroad for pit TR-1 is currently not designed. With the uncertainty of the initial pit, the design has not been completed. The design will be provided prior to construction. No changes to the Mine Plan have been made in response to this comment.

Comment DM 6 – Round 1

Mine Plan, MP.3.1.3 – A primary haul road appears to cross the Tongue River using the bridge that is currently in place from previous mine usage. Please discuss any updates needed for that bridge to be adequate for the intended usage.

Response DM 6 – Round 1

The revised primary haul road alignments do not cross this bridge and the use of this bridge for haul trucks and other traffic associated with the mine is not planned. Updated Exhibit MP.3-1.

Comment DM 6 – Round 2

No comment received.

Response DM 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 7 – Round 1

Mine Plan, Exhibit MP4-3 shows Overburden Stockpiles OB-12 and OB-13, and Topsoil Stockpile TS-6 being located directly in the Slater Creek channel, without any mention of redirecting slater creek, or otherwise preventing the hydrologic consequences of damming up the creek with Overburden and Topsoil stockpiles. Please correct.

Response DM 7 – Round 1

Revised Exhibit MP.4-3 as requested with OB-12 and 13 as well as TS-6 moved out of slater creek channel.

Comment DM 7 – Round 2

No comment received.

Response DM 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DM 8 – Round 1

Mine Plan, MP.7 – Because of the proximity of the planned facilities primarily in T57, R84 Sec.15 to the Tongue River and Goose Creek, I would like to see surface water monitoring upstream of these facilities on Goose Creek and Tongue River, and downstream of these facilities on Tongue River. Please discuss the feasibility of fulfilling this request, with reasoning.

Response DM 8 – Round 1

Revised text as requested. Revise Exhibit MP.7-1 with USGS stream gage location that is within the viewing area.

Comment DM 8 – Round 2

No comment received.

Response DM 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 11 – Round 1

Mine Plan, 11) Depending upon the outcome of required overburden sampling, commitment for special handling of unsuitable overburden will be required to assure that placement of unsuitable materials so as not to hinder plant growth or to adversely affect surface or groundwater quality will be required in the Mine Plan.

Response DS 11 – Round 1

See section MP.4.6.1, fourth paragraph.

Comment DS 11 – Round 2

Response is not adequate. Section MP.4.1.6 does not discuss placement of unsuitable materials above groundwater sources which will undoubtedly be encountered in early mining progressions at this mine. Unsuitable materials taken from above the groundwater level cannot be placed within the groundwater zone. Please address this and describe how the mine plan pit sequence of removal and backfill will be altered to accommodate placement of suitable materials near the surface or in the aquifer zone during mining. This may require stockpiling of materials to assure the best quality materials will be used.

Response DS 11 – Round 2

The majority of the permit area is dry. Therefore, most backfill materials will not be placed in an aquifer. Additionally, it is generally accepted that if unsuitable materials are placed below the water table, there will not be cause for concern. If unsuitable materials are place below the water table, they will not have the opportunity to oxidize. If unsuitable materials are above the water table, they may oxidize, but they won't be transported by groundwater flow. The only zone that could potentially cause concern is the limited area where the potentiometric surface fluctuates. In this way, unsuitable materials can be oxidized and transported by groundwater flow. Due to the overburden and coal seams being primarily dry and the majority of mining activities occurring above the potentiometric surface, placement of unsuitable materials within an aquifer is not anticipated to be a concern.

Comment DS 11 – Round 3

No comment received.

Response DS 11 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 12 – Round 1

Mine Plan, 12) Does RAMACO provide a better detailed description of the topsoil salvage and handling process than that discussed in section MP.4.2.1? The

description provided is not detailed so as to provide a description of the equipment used, the methods for assuring adequate soil salvage, or whether topsoil and subsoil salvage will follow the recommendations in Appendix D7 for stockpiling topsoil separate from subsoil. (Map Unit A Cambira Loam, Map Unit B Zigweid Loam, Map Unit C Forkwood Loam, Map Unit G Bauxson Loam, Map Unit H Haverdad Loam, Map Unit U Ulm Clay Loam) Please understand that topsoil and subsoil may only be mixed if both meet Guideline 1 suitability criteria. Please include more detail for topsoil salvage and handling or let the LQD know where the information may be accessed.

Response DS 12 – Round 1

Revised text as requested.

Comment DS 12 – Round 2

Response is not adequate. Details of your topsoil salvage operation have not been adequately provided in the Mine Plan. Please provide the requested details of the topsoil salvage operation as stated above.

Response DS 12 – Round 2

The text in Section MP.4.2.1 has been supplemented to describe the topsoil salvage operation in more detail. The text now states that RAMACO will likely salvage topsoil with dozers, loaders, and trucks based on the current plan for equipment purchase. However, planning is still in its infancy and different, though typical, topsoil salvage equipment could be used. Methods to assure accurate salvage were already outlined in Section MP.4.2.1 in the three bulleted steps provided by WDEQ/LQD Guideline 1. However, these were supplemented with examples. Drilling or test pits ahead of salvage will ensure proper topsoil removal. Equipment operators and qualified personnel will be trained to recognize the difference in soil profiles. Additionally, Section MP.4.2.1 now states that RAMACO will generally follow the recommendations of Appendix D7 for the separation of topsoil and subsoil to ensure that unsuitable subsoil will not be mixed with topsoil. However, RAMACO reserves the right to mix topsoil and subsoil, if subsoil is suitable as a plant-growth medium, according to WDEQ/LQD R&R Chapter 4, Section 2(c). For example, Map Unit A, Map Unit B, Map Unit C, Map Unit H, and Map Unit U are all suitable across the entire profile (topsoil and subsoil) and are not required by rules and regulations to be separated. Therefore, RAMACO will not have separate stockpiles for subsoil. If subsoil is suitable, it will be salvaged. If subsoil is not suitable, it will not be salvaged. Any suitable subsoil that is salvaged will be mixed into topsoil stockpiles.

Comment DS 12 – Round 3

Response is not adequate. The LQD will allow mixing of suitable and unsuitable soil/subsoil if the resulting mix is suitable or only slightly marginal. Chapter 4, Section 2(c)(iii) provides the Administrator with the ability to require segregation of topsoil and subsoil if the Administrator determines that the practice is necessary for

vegetation establishment. However, the subject of this comment was to provide more detail about the methods that will be employed by the company and equipment operators to ensure adequate salvage will occur (color change in soils, staking with depths ahead of salvage, etc.). The LQD recommends that RAMACO review other approved permits for adequate topsoil/subsoil handling language in order to assure adequate detail is provided in the RAMACO permit application for topsoil handling.

Response DS 12 – Round 3

Section MP.4.2.1 has been revised to include details on staking prior to topsoil salvage operations. Data obtained during drilling and test pits ahead of stripping activities will be used to conduct depth staking on 500 foot grid centers. Section MP.4.2.1 includes other details describing adequately the topsoil salvaging procedures. A commitment has been added to the end of Section MP.4.3.1 to prevent overburden materials on native topsoil areas during overburden removal operations.

Comment DS 13 – Round 1

Mine Plan, 13) Section MP.4.2.3 all topsoil stockpiles, even those stockpiled temporarily or windrowed at the edge of a disturbance, must be identified by a topsoil sign from initiation of the salvage operation as required under Chapter 4, Section (c)(D) that states that signs must be in place at the time stockpiling is begun. Therefore, the text in the first paragraph of this section stating that signs will not be required must be corrected. Signs will always be required to identify all salvaged topsoil and must be placed on all approaches to the topsoil and no more than 150 feet from the stockpile location.

> a. Additionally, all stockpiled topsoil, even windrowed along the edge of a disturbance, must be protected against wind and runoff erosion, compaction or potentially toxic materials no matter what the longevity designation of the stockpiled material. The Mine Plan must provide a commitment to these requirements.

Response DS 13 – Round 1

Revised text as requested.

Comment DS 13 – Round 2

No comment received.

Response DS 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 14 – Round 1

Mine Plan, 14) Section MP.4.2.4(4.2.1?) does not discuss topsoil salvage during winter months. Salvage during the winter months, especially of shallow soil profiles, is discouraged by the LQD due to a lack of depth control caused by varying depths of permafrost. Please provide discussion concerning this subject.

a. Even short term and temporary topsoil stockpiles must be identified on maps and the volumes accounted for in annual reports. Several criteria that must be considered are well established for placement of topsoil stockpiles and include:

i. Construction of stable areas to minimize wind and water erosion

ii. Stockpiles will not be placed in areas where runoff water can contribute to the loss of topsoil (side hills or drainages)

iii. Stockpiles will not be constructed on unsuitable backfill locations

iv. Stockpiles will have associated sediment control established in advance of construction

v. Stockpiles will not be constructed at locations of known cultural or wildlife resources for which protection or mitigation is required.

b. Other topsoil stockpile construction and maintenance considerations include:

i. Stockpiles will be constructed with slopes of 3h:1v or less

ii. Bypass ditches, berms or equivalent may be used to divert runoff around stockpiles

iii. Stockpiles that will remain for less than 1 year may be revegetated or treated with surface roughing methods such as ripping or discing to reduce runoff and wind erosion potential.

Response DS 14 – Round 1

Revised text as requested.

Comment DS 14 – Round 2

Section MP.4.2.1 does not discuss topsoil salvage during winter months. Salvage during the winter months, especially of shallow soil profiles, is discouraged by the LQD due to a lack of depth control caused by varying depths of permafrost. Please provide discussion concerning this subject.

a. Even short term and temporary topsoil stockpiles must be identified on maps and the volumes accounted for in annual reports. Several criteria that must be considered are well established for placement of topsoil stockpiles and include:

iii. Stockpiles will not be constructed on unsuitable backfill locations

v. Stockpiles will not be constructed at locations of known cultural or wildlife resources for which protection or mitigation is required.

Responses to the above items were not adequate. Please provide the required permit commitments.

Response DS 14 – Round 2

A statement to Section MP.4.2.1 has been added that states RAMACO will not salvage topsoil if high antecedent moisture conditions have led to deep frost cementing topsoil to overburden. Additionally, the statement has been made that RAMACO will salvage topsoil ahead of planned winter mining activities to avoid complications with deep frost.

All currently planned topsoil stockpiles have been identified on Exhibit MP.4-3. A statement has been added to Section MP.4.2.3 in the first paragraph that any accumulations of topsoil that meet the definition of a stockpile will be mapped with volumes accounted for in the Annual Report. Another statement has been added to the first paragraph of Section MP.4.2.3 that topsoil stockpiles will not be constructed on unsuitable backfill or known locations of cultural or wildlife significance that require protection and mitigation.

Comment DS 14 – Round 3

No comment received.

Response DS 14 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 15 – Round 1

Mine Plan, 15) Section MP.4.2.7, page MP 4-5. Aside from operation of soil salvage equipment with the potential for soil contamination due to blown hydraulic hoses or small fuel leaks, the LQD expects not contamination of soil during the mining operation. Contamination of subsoil and overburden is more likely. The LQD recommends that RAMACO re-phrase the section header and text to show petroleum contaminated materials being and not soils.

a. What criteria will RAMACO use to determine if spills require reporting to the DEQ, and what process will be used in spill reporting?

b. What will the operational procedure be for management of the proposed on-site landfarm for contaminated materials, and where will it be located? Will it be identified on the ground by a sign?

Response DS 15 – Round 1

Revised text as requested.

a. See Section MP-4.5.2 of Addendum MP-4
b. See Section MP-4.5.3 of Addendum MP-4

Comment DS 15 – Round 2

No comment received.

Response DS 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 16 – Round 1

Mine Plan, Section MP.4.2.8. Please provide a detailed description for the disposal of empty drums, not just a citation of the EPA Rule which is probably not know by most readers of this public document.

Response DS 16 – Round 1

The EPA Code Federal Regulation cited is public information which may be accessed online or at a public library if the reader desires to know the specifics requirements and steps regarding container disposal.

Comment DS 16 – Round 2

Response is not adequate. The Round 1 review comment was not addressed. Please provide the required detail in the drum disposal discussion. The general public may or may not have access to the Federal Register, but must provide a public document which stands alone, without need to reference other documents to provide the information required to explain the commitments made. Therefore, RAMACO must expand on what the EPA Rule requires for the readers of this permit.

Response DS 16 – Round 2

RAMACO has committed to disposing of empty drums according to Title 40 CFR Part 261.7. RAMACO has cited the federal regulation that stipulates the disposal of empty containers. RAMACO will not summarize this federal regulation in the Brook Mine Permit for two reasons:

1. Federal regulations are made public. Any member of the public has access to the Code of Federal Regulations. This regulation was accessed by WWC on the

internet, meaning any person with access to the internet can search and find this regulation. If a member of the public does not personally have access to the internet, said person can go to the local public library to obtain access to the internet.

2. The Code of Federal Regulations is a living document that is subject to change at any time. By committing to the stipulations of Title 40 CFR Part 261.7 without summarizing the regulation, RAMACO commits to observing any requirements of the regulation at any time no matter how the regulation might change in the future. If RAMACO summarizes the regulation and the regulation changes in the future contrary to what it originally stipulated, RAMACO will be automatically stating commitments contrary to federal regulation. The possibility of being out of compliance with federal regulation is avoided by simply citing the regulation RAMACO commits to observing.

Addendum MP-4 remains unchanged.

Comment DS 16 – Round 3

No comment received.

Response DS 16 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 17 – Round 1

Mine Plan, MP.4.3.1 discusses overburden removal processes. However, little detail is given to explain the actual process for overburden handling. Will the first cut be stockpiled and used to fill the last cut? When special handling is required, which is almost certain given the nature of some overburden and the need for some soil replacement materials, what assurance will be made that poor quality materials will be safely located in the backfill or in separate stockpiles, or that topsoil substitutes will be handled and stored as topsoil in a useful manner as required under Chapter 4, Section 2(b)(x)(A)? Please provide a more detailed overburden handling plan. Perhaps some of these details are observed in later sections. Please provide additional details not provided elsewhere.

Response DS 17 – Round 1

See Sections MP.4.3.5, MP.4.6 and MP.4.7. Revised text as requested.

Comment DS 17 – Round 2

No comment received.

Response DS 17 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 18 – Round 1

Mine Plan, Section MP.4.3.4. The volumetric analysis shown in Table MP.4-4 and MP.4-5 may change depending on results of required additional overburden sampling and volumetric analysis. If the overburden depth overlying coal changes as a result of additional sampling, the volumetric analysis will also change. If post mining contour changes are necessary due to adjusted swell factors permit revision will probably not be required until the changed PMT exceeds plus or minus 20 feet of the approved at which time a Reclamation Plan revision will be required. This kind of detail should be included in the permit commitments.

Response DS 18 – Round 1

Revised text as requested.

Comment DS 18 – Round 2

Response is not adequate. Does the volumetrics of stockpiles include the coal partings and heavily oxidized coal seams that will not be mined for sale and have not been included in overburden quality assessment data? Will swell factors be adequate to meet PMT requirements after mining of coal from box cuts? What steps will be taken, such as borrow areas not currently shown on any maps, would be used to mitigate inadequate backfill, keeping in mind that contouring must provide reestablishment of drainage patterns on the mine.

Response DS 18 – Round 2

The volumes of materials required to be placed in stockpiles were calculated from grid files in AutoCAD. The grid files are based on borehole/exploration hole data. These volumes were then increased by 16% (as stated in Section MP.4.3.4) to account for swell. In response to Comment DS 22 – Round 2, the topsoil volumes have been recalculated using the specified depths in Appendix D7 within each soil polygon. In most of these cases, the salvage depth of topsoil was increased from 0.5 feet to nearly 1.5 feet (or whatever the appropriate salvage depth was in the specific area). This significantly increased the volume expected to be placed in topsoil stockpiles. However, that volume that was originally assumed to be overburden that is now in topsoil stockpiles was not removed from the overburden stockpiles. Therefore, the volumes shown for overburden stockpiles should be slightly high. This will provide for additional storage of coal partings or materials from heavily oxidized coal seams should such volume requirements be necessary. The overestimate of overburden stockpile size is conservative. This simply shows that the mine does have the capability to store all the overburden materials. It is unnecessary to readjust overburden stockpiles to be smaller after topsoil calculations since this material was planned to be placed during reclamation.

As stated in Section MP.4.3.4, the actual swell factors will be monitored. Also stated in Section MP.4.3.4, if the actual swell factors differ significantly from what is

approved, the post mining topography will be adjusted. This is standard practice for coal mines, and RAMACO is prepared to meet this obligation. RAMACO cannot be certain what the swell factors will be until after material is excavated, stockpiled, handled, and reclaimed. Once the material is monitored and volumes of swelled material are better known, this data will be reported in the Annual Report, as stated in Section MP.4.3.4.

In reference to the PMT, please refer to the Reclamation Plan. As shown in Exhibit RP.3-1, all drainage patterns were maintained. Any borrow to tie the PMT into the existing ground occurred within the disturbance boundary. Because of the relatively minimal disturbance by the Brook Mine, reclaiming the surface to nearly premining conditions was relatively simple. Again, should the swell factor vary significantly from what is currently assumed, the PMT will be redone to account for this adjustment and should any additional borrow areas be required, the disturbance boundary will be increased.

Comment DS 18 – Round 3

No comment received.

Response DS 18 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 19 – Round 1

Mine Plan, Section MP.4.6.1. The typical overburden sampling protocol as stated in Guideline 1 calls for one sample taken every 40 square acres of the permit area. Overburden sampling for underground mining operations differs from typical coal mine sampling protocols and is stated in the Coal Rules, Chapter 7, Section 1(a)(i)(A) which calls for overburden sampling and characterization on areas where surface operations will cause removal of overburden down to the level of the coal seam. Please make changes to the text accordingly and perform additional overburden sampling where required.

Response DS 19 – Round 1

Revised text as requested.

Comment DS 19 – Round 2

No comment received.

Response DS 19 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 20 – Round 1

Mine Plan, Section MP.4.3.5. A statement was made in this section that "Overburden stockpiles will only block ephemeral drainages if runoff control and sediment control measures are made and approved by WDEQ/LQD." Placement of overburden in ephemeral drainages will require a discussion of how water will be diverted around the overburden stockpile to prevent impoundment of water in addition of a discussion of sediment control measures for the stockpile to prevent of-site impacts of erosion down-slope from the stockpile. The LQD recommends that no overburden stockpiles be placed in ephemeral drainages.

Response DS 20 – Round 1

Revised Exhibit MP.4-3.

Comment DS 20 – Round 2

Response is not adequate. No response was provided. Please make necessary changes to the Mine Plan language concerning placement of overburden stockpiles.

Response DS 20 – Round 2

The statement reflects the allowances made by WDEQ/LQD rules and regulations. The statement was not made as a certainty that overburden piles will be placed in ephemeral drainages. Instead, the statement is provided in case overburden piles have to be placed in ephemeral drainages and provides the guidance as to how this will be done according to WDEQ R&R. WDEQ/LQD R&R Chapter 4, Section 2(c)(xi)(B) states:

"Ephemeral drainages may be blocked if environmentally sound methods for dealing with runoff control and sedimentation are approved by the Administrator."

The Mine Plan currently states in Section MP.4.3.5 in the first paragraph:

"Overburden stockpiles will only block ephemeral drainages if runoff control and sediment control measures are made and approved by WDEQ/LQD."

"…runoff control and sediment control measures are made and approved by WDEQ/LQD" implies that if an overburden stockpile blocks an ephemeral drainage, discussion and approvals by WDEQ will be made for diverting water, use of ASCMS, prevention of down-slope impacts, etc. before the placement of the stockpile. Because the permit text meets WDEQ/LQD R&R, no changes have been made to the text.

As shown in Exhibit MP.5-1, all of the overburden stockpiles avoid being placed such that they block ephemeral drainages. All ephemeral drainages flow around the stockpiles. However, the statement remains in the permit should RAMACO be required to block an ephemeral drainage and seeks the permission and approval of WDEQ/LQD, as allowed by WDEQ/LQD R&R Chapter 4, Section 2(c)(xi)(B).

Comment DS 20 – Round 3

No comment received.

Response DS 20 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 21 – Round 1

Mine Plan, Tables MP.1-1, MP.1-2 and MP.4-1 must show the actual years for proposed progressions, or the year 1 progression must be tied to a specific year in the Mine Plan text.

Response DS 21 – Round 1

Revised tables as requested. Added note saying that Year 0 corresponds to the year 2016.

Comment DS 21 – Round 2

No comment received.

Response DS 21 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 22 – Round 1

Mine Plan, Tables MP.4-3 and MP.4-5. Topsoil volumes appear to be underestimated in TS- 2, TS-6, TS-10 and TS-11 while underestimating the proposed volume in TS-1. Also overburden volumes appear to be underestimated in OB-4, OB-7, OB-11, OB-14 and OB-15, and overestimated in OB-16, which may affect estimates presented in Table MP.4-4 as well.

Response DS 22 – Round 1

Volumes are estimated based on the stripping volumes and available backfill area with excess material going to and from stockpile for contemporaneous reclamation. No updates will occur in response to this comment.

Comment DS 22 – Round 2

Response is not adequate. Several discrepancies have been discovered during the review. TS-1 capacity according to Table MP.4-3 is 89,600 cubic yards, but Table MP.4-1 shows 120,200 cubic yards added to the stockpile. Our estimate are significantly different from yours based on the footprint and average height.

Stockpile	Basal Area (acres)	Average Height (ft)	Volume Estimate (cy)	RAMACO's Volume Estimate (cy)
TS1	1.4	20	22,587	89,600
TS2	3.5	45	127,051	85,100
TS3	1.5	30	36,300	70,300
TS4	1.1	25	22,183	26,600
TS5	3.0	55	133,101	98,400
TS6	4.5	45	163,351	150,800
TS7	0.7	20	11,293	13,800
TS8	0.9	25	18,150	19,300
TS9	0.8	20	12,907	15,900
TS10	2.0	50	80,667	70,300
TS11	0.9	20	14,520	12,000

The volume of topsoil in stockpiles by year presented in Table MP.4-1 appears to be based on a six-inch salvage depth as shown below. Perhaps the salvage depth was intended to be 2 ft. but the volumes would have to increase by a factor of 4.

Stockpile	Acres Salvaged	Volume Salvaged (cy)	Depth (ft) (Volume (cu.ft./Area (sq.ft.))
TS1	80	64,500	0.50
TS1	43	34,700	0.50
TS1	23	18,600	0.50
TS1	13	10,500	0.50
TS1	19	15,300	0.50
TS1	5	4,000	0.50
TS1	9	7,300	0.50

The LQD requires RAMACO to evaluate topsoil stockpile volumes and depths of soil salvage expressed on specific areas of disturbance since each disturbance will undoubtedly result in different salvage and replacement depths.

All volumetric data in tables presented in the Mine Plan and in the reclamation bond estimate must be must be correct, so the LQD requires that:

a) All topsoil salvage and bond estimates must be based on depth estimates provided in Appendix D7 and the approximate acreage of each soil series disturbed. Therefore, the soil salvage depth and topsoil volumes expressed in table MP.4-3 must be linked to site-specific soil depths. Table MP.4-1 must also include salvage depths for each calculation.

b) All following topsoil salvage and volumetric tables must be corrected based on volumes for TableMP.4-1.

c) All reclamation performance bond estimates must be changed to reflect corrected topsoil volumes.

d) An average depth of topsoil to be salvaged for the entire mining operation must be provided in the Mine Plan text.

e) Topsoil stockpile footprints and heights will need to be corrected on tables and figures.

Response DS 22 – Round 2

Responses to the list of WDEQ/LQD requests are as follows:

a) Topsoil salvage estimates were updated to reflect the salvage depths of specific soil types in Appendix D7. To accomplish this, the soil polygons in Appendix D7 Exhibit D7.3-1 were used to create a 3D grid in AutoCAD that represented the salvage depth for each soil type. Volumes were then "removed" within each topsoil stripping area shown in Exhibit MP.4-2. Outputs from AutoCAD included the average cut depth within each topsoil stripping area. The average cut depth essentially reflects the weighted average of cut depths depending on recommended salvage depth of each soil and the areal extent of each soil type within the stripping areas. The average cut depth is now provided in Table MP.4-1. Again, this depth reflects a weighted average and will not match the recommended salvage depths in Appendix D7. To reflect what topsoil types will be salvaged in each stripping area, the soil polygons shown on Exhibit D7.3-1 were added to Exhibit MP.4-2 which already shows the topsoil stripping areas. This exhibit can be compared to Table MP.4-1 for volume calculations.
b) Table MP.4-1, Table MP.4-2, and Table MP.4-3 were all updated to show the corrected topsoil volumes.
c) The weighted average of salvage depth is provided in the Mine Plan text in Section MP.4.2.1 in the second paragraph.
d) The topsoil stockpile footprints and heights have been corrected on Table MP.4-3 to reflect the new volumes. Please note: Stockpile heights are only averages. The stockpile height varies considerably for most stockpiles because of the nature of the topography in the Brook Mine permit area. When AutoCAD builds the 3D stockpiles, the topography is taken into account for the areal extent of the base. Therefore, hand calculations will unlikely replicate the volumes of stockpile by only considering basal area, average height, and typical side slope. To reflect the change in the topsoil stockpile footprints, the disturbance boundary was updated in Exhibits MP.1-1, MP.4-1, MP.4-2, MP.4-3, MP.4-4, MP.4-5, MP.5-1, MP.5-2, and MP.16-1. The hatches that represent the stockpile footprints were updates in Exhibit MP.4-3 and Exhibit MP.5

Comment DS 22 – Round 3

No comment received.

Response DS 22 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DS 23 – Round 1

Mine Plan, Exhibit MP.4-2 and MP.4-3 must show the dates (actual years) for the salvage of topsoil and removal of overburden, or year 1 must be tied to an actual year when operations will begin (2016, 2017, etc.). The map or tables in the Mine Plan must provide proposed years and volumes for stockpile construction as well.

Response DS 23 – Round 1

Revised Exhibits as requested. Added note saying that Year 0 corresponds to the year 2016 on all Exhibits with years.

Comment DS 23 – Round 2

No comment received.

Response DS 23 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 30 – Round 1

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30 – Round 1

Revised Exhibits as requested.

Comment DS 30 – Round 2

No comment received.

Response DS 30 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 32 – Round 2 (New Comment)

The LQD requests that RAMACO provide pit identification number/names for all proposed initial box cut locations which will reduce confusion for identification of incident locations or for descriptions during inspections. (DS)

Response DS 32 – Round 2 (New Comment)

Exhibits MP.1-1, MP.4-1, MP.4-4, MP.5-1, MP.15-1, and MP.15-2 were all updated to include pit identification numbers. The text in Section MP.6.1 was also updated to include pit identification numbers to more conclusively identify pits in the hydrologic consequences discussion.

Comment DS 32 – Round 3

No comment received.

Response DS 32 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DE 1 – Round 1

Mine Plan, Figure MP.1.2 and page MP-3 – MSHA and best practices may require a safety berm on this safety bench which could require a wider bench. Figure MP.1.2 notes a minimum of 35' but the text on page MP-3 just states the bench will be 35' wide. There is a real possibility this safety bench might be used for light plants so it may need to be wider for access and small vehicle use as well as providing a safety bench.

Response DE 1 – Round 1

Revised text as requested.

Comment DE 1 – Round 2

No comment received.

Response DE 1 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 2 – Round 1

Mine Plan, Table MP.1-1 – The total disturbance doesn't seem to match the overall disturbance listed for the trench mining and facilities. Please explain or correct.

Response DE 2 – Round 1

Revised table as requested.

Comment DE 2 – Round 2

No comment received.

Response DE 2 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 3 – Round 1

Mine Plan, Section MP.2.3, page MP-9 – The 1st sentence would be better if it started, "The explosive materials…". The 2nd sentence should replace the word "detonating" with "explosive". The 5th sentence in the 2nd paragraph should include cast boosters. The 6th sentence in the 2nd paragraph should discuss storage of emulsions, water gels, and slurries also. This section should also commit to proper signage of the explosive storage area. Please correct.

Response DE 3 – Round 1

Revised text as requested.

Comment DE 3 – Round 2

The third sentence in the 2nd paragraph needs to be corrected. It states one magazine will contain cast boosters and the other magazine will contain detonating cod and boosters. Boosters cannot be stored with detonating cord or detonators. I believe the text should say, "…the other magazine …will contain detonating cord, detonators and other initiation products. Please correct.

Response DE 3 – Round 2

The third sentence of the second paragraph in Section MP.2.3 was changed as suggested to reflect that boosters will be stored separately from detonating cord, detonators, and other initiation products.

Comment DE 3 – Round 3

Response adequate.

Comment DE 4 – Round 1

Mine Plan, Section MP.5.7.5, page MP-34 – The word "of" in the 2nd line of the last paragraph should be "or". Please correct.

Response DE 4 – Round 1

Revised text as requested.

Comment DE 4 – Round 2

No comment received.

Response DE 4 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 5 – Round 1

Mine Plan, Section MP.6.1, page MP-39 – The 1st sentence of the 1st full paragraph needs some improvement so it reads properly and makes sense. Please correct.

Response DE 5 – Round 1

Revised text as requested.

Comment DE 5 – Round 2

The 1st sentence of the 1st full paragraph still needs to be improved so it makes sense. The current version says "… Hidden Water Creek watershed will occur…" It doesn't make sense as it is written. Please correct.

Response DE 5 – Round 2

The text was corrected in the fourth paragraph of Section MP.6.1 to state:

"In the fourth and fifth years, mining occurs east of the Slater Creek watershed and west of the Hidden Water Creek watershed. Mining will occur primarily in minor drainages of the Tongue River in Sections 8, 17, and 18, T57N, R84W, as seen on Exhibit MP.1-1."

Comment DE 5 – Round 3

Response adequate.

Comment DE 6 – Round 1

Mine Plan, Section MP.14.2, page MP-55 – The 2nd paragraph discusses the use of "cast primers". The term should be "cast boosters" as it doesn't become a primer until the detonator is added or detonating cord is attached to it. The discussion of priming holes should describe the use of a cast booster and how it is made-up to become a primer, i.e. with detonating cord or a detonator (blasting cap). Please correct.

Response DE 6 – Round 1

Revised text as requested.

Comment DE 6 – Round 2

No comment received.

Response DE 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 7 – Round 1

Mine Plan, Section MP.14.3.2, page MP-56 – In the 2nd line the item "(primer with detonator)" should be changed to "(cast booster with detonator)". Please correct

Response DE 7 – Round 1

Revised text as requested.

Comment DE 7 – Round 2

No comment received.

Response DE 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 8 – Round 1

Mine Plan, Section MP.14.3.2, page MP-56 – The 2nd paragraph discusses powder factors in coal and overburden and the high end of the ranges is extremely high for the type of rock and coal in this area. RAMACO should eliminate the range and simply state powder factors will be adequate to effectively fragment the overburden and coal.

Response DE 8 – Round 1

Revised text as requested.

Comment DE 8 – Round 2

RAMACO kept the powder factor range of 0.2-0.7 pounds per ton in the text. As stated in the 1st round review the high end of the range is extremely high for coal. I would recommend that the text simply state that the powder factors will be adequate to effectively fragment the coal and overburden. Please correct.

Response DE 8 – Round 2

In Section MP.14.3.2, the powder factor ranges for coal and overburden were removed as suggested. The text now states that the powder factors will be chosen to adequately fragment coal or overburden, depending upon which is being blasted.

Comment DE 8 – Round 3

Response adequate.

Comment DE 9 – Round 1

Mine Plan, Section MP14.3.3, page MP-56 – RAMACO should reword this to say that initiation will be done using non-electric or electric systems, which may include electronic detonators, shock tube detonators, detonating cord, electric detonators or a

combination of these. Igniter cord is used to initiate safety fuse and it's highly unlikely that any safety fuse will be used at this mine. Please correct.

Response DE 9 – Round 1

Revised text as requested.

Comment DE 9 – Round 2

No comment received.

Response DE 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 10 – Round 1

Mine Plan, Section MP.14.4, pages MP-56 & 57 – It is probable that emulsions will also be stored on site so it should be mentioned since emulsion/ANFO blends are the most widely used product in wet holes. Please correct.

Response DE 10 – Round 1

Revised text as requested.

Comment DE 10 – Round 2

No comment received.

Response DE 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 11 – Round 1

Mine Plan, Section MP.14.6, pages MP-57 & 58 – Residents who request a pre-blast survey must make the request to the permittee and the Administrator of Wyoming Land Quality Division (LQD). The permittee is responsible for getting the pre-blast survey done and distributed to the person that requested it and the LQD Administrator. Please correct.

Response DE 11 – Round 1

Revised text as requested.

Comment DE 11 – Round 2

No comment received.

Response DE 11 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 12 – Round 1

Mine Plan, Section MP.14.7, pages MP-58 & 59 – LQD will not approve protecting uninhabited structures (what LQD refers to as engineered structures) at 8.0 inches per second (ips) of peak particle velocity. LQD would allow a maximum limit of 5.0 ips. RAMACO would have to assure that this limit was not exceeded by the use of a seismograph at these structures on all blasts. RAMACO could apply for a modified scale distance factor to show compliance with this limit of 5.0 ips by submitting a vibration study and doing a regression analysis to show the allowable ppv is not exceeded at a 95% confidence level. However, this will require the vibration study be submitted with seismograph records from shots in the mining area so it cannot be done until after some blasting has been done at the mine. Please correct this text.

Response DE 12 – Round 1

Revised text as requested.

Comment DE 12 – Round 2

No comment received.

Response DE 12 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 13 – Round 1

Mine Plan, Section MP.14.8.1, page MP-60 – The discussion on typical pattern size should be changed to more general language. Using the parameters given the powder factor used would be approximately 0.16 lbs./CY using ANFO and in the 0.23-0.25 lbs./CY range when shooting an emulsion blend. These powder factors are not high enough to adequately fragment the overburden. Please correct.

Response DE 13 – Round 1

Revised text as requested.

Comment DE 13 – Round 2

RAMACO continues to discuss a "typical" pattern size and stemming amount. Given the bench height, pattern size, stemming height, hole diameter listed it would be nearly impossible to get powder factors high enough to adequately fragment the overburden. The large burdens and spacings in a 50' high bench would likely leave hard zones between the holes. The large amount of stemming compared to powder

column height gives poor powder distribution in the holes which will likely lead to hard zones in the upper portions of the bench. This discussion needs to be improved.

Response DE 13 – Round 2

The text in Section MP.14.8.1 has been edited to discuss generalities in overburden blast design as opposed to listing the specifics of before. The text now provides more open design standards for RAMACO to function as necessary for safe and efficient blasting during mining operations.

Comment DE 13 – Round 3

Response adequate.

Comment DE 14 – Round 1

Mine Plan, Section MP.14.8.1, page MP-60 – The 2nd paragraph says if water is in the holes a slurry or water gel explosive will be used. Most likely an emulsion/ANFO blend with good water resistance will be used in wet holes and not a slurry or water gel. Please correct.

Response DE 14 – Round 1

Revised text as requested.

Comment DE 14 – Round 2

No comment received.

Response DE 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 15 – Round 1

Mine Plan, Section MP.14.8.1, page MP-60 – The 3rd paragraph discusses the explosive weight per hole and the powder factors. The explosive densities listed are correct but the pounds per hole and powder factors are incorrect. In a 7.875" hole and with a density of ANFO of 0.85 g/cc the pounds/foot of hole is 17.95 lbs. and with 24' of powder column the pounds/hole is 431 lbs., making the powder factor = 0.16 lbs./CY. Similarly using an emulsion blend of 1.32 g/cc the pounds/foot = 27.87 lbs. and the pounds per hole would be 669 lbs. so the powder factor =o.25 lbs./CY. In the 50' hole described with 26' of stemming and 24' of powder the powder distribution is poor so it would likely lead to blocky material near the top of the bench. Please correct.

Response DE 15 – Round 1

Revised text as requested.

Comment DE 15 – Round 2

No comment received.

Response DE 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 16 – Round 1

Mine Plan, Section MP.14.8.2, page MP-61 – Drilling a 35' x 35' pattern in a 15' thick coal seam with a 7.875" hole and 4.5' of stemming will probably result in excessive flyrock, stemming ejection, high airblast and hard zones between the holes. Expecting to stem 4.5' is not realistic – in the field the blaster is going to try to hold for 4' or 5' of stemming. Again RAMACO discusses using slurry or water gel in wet hole when an emulsion/ANFO blend with high water resistance would probably be used. Please correct. Also the powder factor listed for coal is probably a little high so it would be better to just say that the powder factor will sufficient to fragment the coal for the prime movers. Please correct.

Response DE 16 – Round 1

Revised text as requested.

Comment DE 16 – Round 2

RAMACO lists a pattern Drilling size of 35' x 35' and then in the text states the burden and spacing will 17.4' and 35.4'. As stated in the round 1 review comments, this pattern size in a 15' thick coal seam with a 7.875" drill hole will probably result in excessive flyrock, airblast and leave behind hard zones between the holes. The 2nd paragraph discuses using slurry and water gel and it is likely that an emulsion/ANFO blend with high water resistance would be used. RAMACO needs to revise the text in this section because this plan will not be effective.

Response DE 16 – Round 2

The text in Section MP.14.8.2 has been edited to discuss generalities in coal blast design as opposed to listing the specifics of before. The text now provides more open design standards for RAMACO to function as necessary for safe and efficient blasting during mining operations.

Comment DE 16 – Round 3

Response adequate.

Comment DE 17 – Round 1

Mine Plan, Section MP.14.10, page MP-63 – The last bullet item says that detonation during electric storms might be a reason for unscheduled blasting. This is confusing

because it makes it sound like the operator would shoot during electric storms and the only safe thing to do when an electric storm approaches is clear the pattern and keep everyone a safe distance away until the storm passes. Please correct.

Response DE 17 – Round 1

Revised text as requested.

Comment DE 17 – Round 2

No comment received.

Response DE 17 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 18 – Round 1

Mine Plan, Addendum MP-7, Blaster's Log – Under the "Holes" heading RAMACO should use "burden" not the term "burden spacing". On the 2nd page the word "signiture" should be changed to "signature". Please correct.

Response DE 18 – Round 1

Revised text as requested.

Comment DE 18 – Round 2

No comment received.

Response DE 18 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment KM 11 – Round 2 (New Comment)

LQD recommends that sequence maps be revised to include only yearly backfilling and/or replacement, monthly backfilling and/or replacement areas may not be achievable as a permit commitment.

Response KM 11 – Round 2 (New Comment)

RAMACO appreciates the comment and understands the potential difficulty, but the permit remains unchanged.

Comment KM 11 – Round 3

No comment received.

Response KM 11 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 12 – Round 2 (New Comment)

Exhibit MP.1-1 shows surface disturbance beginning in 2017. However, other maps show disturbance beginning in Year "0", which according to the maps is Year 2016. Please be consistent.

Response KM 12 – Round 2 (New Comment)

Exhibit MP.1-1 has been corrected to properly show surface disturbance beginning in 2016.

Comment KM 12 – Round 3

No comment received.

Response KM 12 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 13 – Round 2 (New Comment)

Exhibits MP.4-2 and RP.5-1 use the same symbol for all years of activities; only color designates different years. Some of the color variations denoting years are not easily discernible from the legend to the map.

Response KM 13 – Round 2 (New Comment)

The exhibits have been changed to use different hatch patterns and colors for years to make separate years more easily discernible.

Comment KM 13 – Round 3

No comment received.

Response KM 13 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 14 – Round 2 (New Comment)

Do the slot openings include truck ramps? How will truck ramps be constructed in each slot?

Response KM 14 – Round 2 (New Comment)

The slot openings will include truck ramps that will be used to remove spoil and coal from the slots to the haul roads. By WDEQ/LQD definition in Chapter 1, Section

2(ds), ramps are not considered roads. As discussed in Section MP.3.1.4, ramps are exempt from mine plan design considerations. The ramps will move and change frequently as mining progresses. To describe a specific way in which the truck ramps will be constructed in each slot would be difficult to accomplish due to the variability in each slot and at each phase of construction of the slot. As Section MP.3.1.4 states, the ramps will be developed with consideration given to the type of equipment operating on them, safety considerations, and surrounding conditions. Safety berms will be installed on all elevated edges.

Comment KM 14 – Round 3

No comment received.

Response KM 14 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 15 – Round 2 (New Comment)

Please confirm the volume of the overburden stockpiles. For example, based on LQD's review of the mine plan and the spoil backfilling sequence maps, it appears that OB-3 will be used to contain all overburden removed from the first slot opening.

Response KM 15 – Round 2 (New Comment)

Please see response to Comment BJ 67. WDEQ/LQD calculations did not consider the side slope of overburden stockpiles, therefore overestimating the volume of overburden stockpiles. Overburden stockpile volumes will be constantly changing over the course of mining due to ongoing reclamation activities. The overburden stockpiles have been sized to accept the required volume of spoil from the trenches, but spoil will likely be cycled in and out of the stockpiles on a regular basis to meet backfilling requirements. Volumes to be placed in stockpiles were calculated from 3D grid files in AutoCAD and given a swell of 16% to approximate the required space.

Comment KM 15 – Round 3

No comment received.

Response KM 15 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 16 – Round 2 (New Comment)

LQD recommends using a swell factor of 11 to 13%, based on our experience in the area.

Response KM 16 – Round 2 (New Comment)

A swell factor of 16% was used as an average approximation. Swell factors of material at other mines in the area have been as high as 20%-22%. After the first pit has been backfilled, a swell study will be conducted and stockpile and PMT design will be reevaluated if necessary. Refer to Section MP.4.3.4 for a discussion that states that actual swell factors will be monitored and PMT will be adjusted if necessary.

Comment KM 16 – Round 3

No comment received.

Response KM 16 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 19 – Round 2 (New Comment)

Page MP-8 states that the "approved Spill Prevention, Control, and Countermeasure (SPCC) plan will be on file with WDEQ and available at the Brook Mine. Who is responsible for approving the plan? WDEQ does not require a SPCC plan to be filed with the agency. SPCC plans is a federal requirement.

Response KM 19 – Round 2 (New Comment)

The text in Section MP.2.1.4 was edited to correctly state that the SPCC plan will be kept onsite at the mine for review and inspection by the EPA.

Comment KM 19 – Round 3

No comment received.

Response KM 19 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 20 – Round 2 (New Comment)

Page MP-8 states that the leachfield(s) will accept water from the change house and equipment service shop. Discharge of industrial wastewater from the equipment service shop into a leachfield may be subject to Chapter 16, Wyoming Water Quality Rules and Regulations.

Response KM 20 – Round 2 (New Comment)

Section MP.2.1.6 states that sewage wastewater from the change house and equipment service shop will be discharged into the leach field. The section does not mention disposal of industrial wastewater into a leach field. However, a statement was added that the septic tank and leach field will be constructed in accordance with WDEQ/WQD rules and regulations.

Comment KM 20 – Round 3

No comment received.

Response KM 20 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 21 – Round 2 (New Comment)

Page MP-8 states that wash down water will be sent to a wastewater impoundment. However Section MP5.2 (page MP-26) state that no wastewater impoundments are currently planned for the Brook Mine. Please discuss.

Response KM 21 – Round 2 (New Comment)

The statement made in Section MP.5.2 that no wastewater impoundments are currently planned was revised to state that designs for a wastewater impoundment are provided in Addendum MP-2. A wastewater impoundment will be required to treat wash down water.

Comment KM 21 – Round 3

No comment received.

Response KM 21 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 22 – Round 2 (New Comment)

Groundwater from dewatering pumps is to be pumped to sumps or NPDES treatment for use in road dust control. What kind of "NPDES" treatment is proposed?

Response KM 22 – Round 2 (New Comment)

The third paragraph of Section MP.5.9 states that the treatment facilities will be sedimentation ponds.

Comment KM 22 – Round 3

No comment received.

Response KM 22 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment KM 23 – Round 2 (New Comment)

The State of Wyoming has primacy for the National Pollutant Discharge Elimination System and issues permits under the Wyoming Pollutant Discharge Elimination

System (WYPDES). Please change all references to NPDES to WYPDES to accurately reflect the current regulatory situation.

Response KM 23 – Round 2 (New Comment)

The reference in the third paragraph of Section MP.5.9 to NPDES was removed. A statement was added that all water is intended to be used, and discharge from the permit area is not anticipated.

Comment KM 23 – Round 3

No comment received.

Response KM 23 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment MK 23 – Round 1

Mine Plan, Section MP.20 Alluvial Valley Floors, The discussion of underground mining in AVFs does not seem necessary given there is no plans for underground mining at the Brook Mine. Furthermore, it is conceivable that circumstances could exist where underground mining of an AVF would not be allowed by the LQD. For example, if the AVF was significant to farming and underground mining of the AVF would result in surface effects such that material damage to the AVF would occur. (MDK)

Response MK 23 – Round 1

While no underground mining is proposed within delineated AVFs, the mine maintains this option. If underground mining is ever planned under the AVF, the appropriate revisions will be made. Revised text as requested.

Comment MK 23 – Round 2

No comment received.

Response MK 23 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 46 – Round 1

Mine Plan, Section MP.4.1 Mining Sequence, 20. On Exhibit MP.4-1, please attempt to show the areas that would be highwall mined versus surface mined. These layers are currently not found until Exhibit MP.15-1. Alternatively, the text in this Section could specify that the areas to be highwall versus surface mined are shown in Exhibit MP.15-1. (MDK)

Response MK 46 – Round 1

Revised text as requested.

Comment MK 46 – Round 2

No comment received.

Response MK 46 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 47 – Round 1

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 21. Only Slater Creek and Hidden Water Creek are labeled and shown in Exhibit MP.5-1. In order to better evaluate the Hydrologic Control Plan, please provide labels and locations for the other stream channels, including Tongue River, Goose Creek, East Fork Earley Creek, and the other unnamed channels (as shown on the USGS 24K Quad) on the proposed permit area. (MDK)

Response MK 47 – Round 1

Revised Exhibit MP.5-1 as requested.

Comment MK 47 – Round 2

No comment received.

Response MK 47 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 48 – Round 1

Mine Plan, Section MP.5.1 Surface Drainage and Erosion Plan, 22. Exhibit MP.5-1 shows overburden stockpiles OB-13 and OB-12, as well as topsoil stockpile TS-6, occurring directly over the Slater Creek channel. The Exhibit does not show any diversion ditches to be used in these locations. Please either move the location of the stockpiles or present a plan to use a diversion to route Slater Creek around the stockpiles. (MDK)

Response MK 48 – Round 1

Revised Exhibit MP.5-1 as requested.

Comment MK 48 – Round 2

No comment received.

Response MK 48 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 49 – Round 1

Mine Plan, Section MP.5.2 Sedimentation and Wastewater Impoundments, 23. Exhibit MP.5-1 shows the locations of two "sediment basins". Are these considered the same as "sedimentation impoundments", as discussed in this Section? If so, the designs for these two impoundments are not found within the Mine Plan. (MDK)

Response MK 49 – Round 1

The "sediment basins" shown in Exhibit MP.5-1 are not considered the same as the "sediment impoundments (reservoirs)." Sediment Basins are considered an Alternative Sediment Control Measure and are discussed in Addendum MP-1. As such, the design for these "sediment basins" are not included in the Mine Plan. However, the design criteria and construction standards for "sediment basins" are similar to those discussed within Section MP.5.2 of the Mine Plan. Revised text as requested.

Comment MK 49 – Round 2

Response accepted. The text states that there are no currently planned sedimentation impoundments planned at the Brook Mine. Please see new Mine Plan and Reclamation Plan comments below that request this clarification elsewhere in the permit. (MDK)

Response MK 49 – Round 2

The statement in Section MP.5.2 was revised to state that sedimentation and wastewater reservoirs will be required for mining operations. The designs of these impoundments are provided in Addendum MP-2. Exhibit MP.5-1 has been revised to show the locations of these impoundments. The disturbance boundary has also been adjusted to encompass the impoundments. Permit-level designs have only been provided for impoundments that are planned to be needed in the first five years of operations. Any potential impoundments required after the first five years will be provided once these impoundments are within five years of ensuing operations. Due to the fact that sedimentation, wastewater, and flood control reservoirs will be required, the text changes referenced in Comments MK 106, 108,109, 110, 111, 112, 113, and 114 (New Comments) were not made. The responses to these comments reflect that.

Sedimentation reservoirs have been designed to replace the ASCMs originally shown within one half of a mile of the Tongue River and Goose Creek to satisfy the requirements set forth in Guideline 15 (as discussed in Comment MK 116 (New Comment)).

Comment MK 49 – Round 3

No comment received.

Response MK 49 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment MK 50 – Round 1

Mine Plan, Section MP.5.3 Flood Control, 24. This section discusses flood control reservoirs but it is not mentioned how many flood control reservoirs would be constructed and where their locations would be. Please provide this information to comply with LQD Coal Rules and Regulations, Chapter 2, Section 5(a)(i)(D)(IV). (MDK)

Response MK 50 – Round 1

Revised text as requested.

Comment MK 50 – Round 2

No comment received.

Response MK 50 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 51 – Round 1

Mine Plan, Section MP.5.4 Diversions, 25. This section mentions permanent diversions, but there are no apparent plans for permanent diversions. Please discuss if permanent diversions are anticipated as part of the mining operation, or if all diversions will be temporary. (MDK)

Response MK 51 – Round 1

Revised text as requested.

Comment MK 51 – Round 2

No comment received.

Response MK 51 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 52 – Round 1

Mine Plan, Section MP.5.4 Diversions, 26. Exhibit MP.5-1 shows only one diversion ditch for Hidden Water Creek in T57N, R84W, Section 9. Please discuss this particular diversion and its typical design in more detail in Section MP.5.4. (MDK)

Response MK 52 – Round 1

Revised text as requested. Add design exhibit of the Hidden Water diversion ditch.

Comment MK 52 – Round 2

No comment received.

Response MK 52 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 53 – Round 1

Mine Plan, Section MP.5.5 Culverts, 27. Please provide a brief statement that commits to a periodic culvert inspection and maintenance plan to ensure that culverts will function properly over time. (MDK)

Response MK 53 – Round 1

Revised text as requested.

Comment MK 53 – Round 2

No comment received.

Response MK 53 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 54 – Round 1

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 28. The first sentence references a sedimentation reservoir. Where is the location of this sedimentation reservoir? Are these the "sediment basins" shown in Exhibit MP.5-1? If not these sedimentation reservoirs need to be added to this Exhibit. (MDK)

Response MK 54 – Round 1

Revised text as requested.

Comment MK 54 – Round 2

No comment received.

Response MK 54 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 55 – Round 1

Mine Plan, Section MP.5.8 Mine Pit Dewatering Plan, 29. The first paragraph references treating and discharging pit water. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 55 – Round 1

Revised text as requested.

Comment MK 55 – Round 2

No comment received.

Response MK 55 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 56 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 30. Exhibit MP.1-1 shows surface disturbance directly over a few areas of Slater Creek and Hidden Water Creek. Please identify the source of disturbance in these areas. Direct disturbance of the channel should be avoided unless there is a plan for a diversion to route the stream around the disturbance. (MDK)

Response MK 56 – Round 1

See response to Comment MK 76, 88 and 99. Revised text as requested.

Comment MK 56 – Round 2

No comment received.

Response MK 56 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 57 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 31. The mining trenches are often discussed with reference to Exhibit MP.1-1. However, the trenches are not shown on this Exhibit. Please add the locations of the trenches to Exhibit MP.1-1. (MDK)

Response MK 57 – Round 1

Revised Exhibit MP.1-1 as requested.

Comment MK 57 – Round 2

Response not accepted. Exhibit MP.1-1 does show trenches in the east portion of the mine, but not the western portion. For example, in the first full paragraph on Page MP-42, it discusses trenches being constructed perpendicular to the flow path of the minor Tongue River drainages. On Page MP-43, several trenches are discussed: one trench constructed parallel to Slater Creek's flow in Section 18, a trench in associated with the surface mine to the west of Slater Creek, and a trench parallel to Slater Creek in Sections 11, 12, and 13. On Page MP-43, a trench is discussed along the "TRD5" channel. Please add all of these trench locations to Exhibit MP.1-1. Also, please use a different color other than grey for the trenches, as this color tends to blend with the topographic line color. (MDK)

Response MK 57 – Round 2

A hatch has been added to Exhibit MP.1-1 in the western portion of the permit boundary to more clearly show the trench locations. Another hatch has been added to Exhibit MP.1-1 to more clearly show the location of the surface mine. The hatch colors were chosen to stand out from the topographic line color. Additionally in response to Comment DS32 (New Comment), RAMACO has provided pit identification numbers on several exhibits and in Section MP.6 to make pit locations more easily understood.

Comment MK 57 – Round 3

Response accepted.

Comment MK 58 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 32. On Page MP-39, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining disturbance will be treated prior to discharge. Please also reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 58 – Round 1

Revised text as requested.

Comment MK 58 – Round 2

No comment received.

Response MK 58 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 59 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 33. Please discuss the diversion ditch for Hidden Water Creek in the first carryover paragraph on Page MP-39. (MDK)

Response MK 59 – Round 1

Revised text as requested. See Hidden Water Creek diversion Exhibit MP.5-2 for further details.

Comment MK 59 – Round 2

No comment received.

Response MK 59 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 60 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 34. On Page MP-40, in the first carryover paragraph from the previous page, it states that any surface runoff to come in contact with mining activities will be treated prior to discharge. Please reference in the text that appropriate WDEQ/WQD discharge permits (e.g., WYPDES) will be obtained prior to any discharge. (MDK)

Response MK 60 – Round 1

Revised text as requested.

Comment MK 60 – Round 2

No comment received.

Response MK 60 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 61 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 35. On Page MP-40, there is a sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility". This statement is unclear. Are the impacts to the actual Slater Creek channel or the uplands and other tributaries in the watershed? Is it reduced ground cover and increased soil erodiblity? Please provide a more explicit description of the possible impacts. (MDK)

Response MK 61 – Round 1

See response to Comment MK 56, 76, 88 and 99. Revised text as requested.

Comment MK 61 – Round 2

Response not accepted. The text clarified that the only direct disturbance to the Slater Creek channel is where the channel will be redirected through a culvert under a proposed haul road. However, the sentence: "The surface disturbance activities will have temporary impacts on Slater Creek geomorphology including ground cover and soil erodibility" is still unclear. This statement implies that the channel stability of Slater Creek will be affected, and that bed and banks could experience excessive erosion. Please provide more discussion on what is meant by impacts to Slater Creek channel geomorphology. (MDK)

Response MK 61 – Round 2

Text was added to the fifth paragraph of Section MP.6.1 to clarify that the geomorphology of the Slater Creek channel such as the bed and banks will not be impacted. The only impacts to ground cover and soil erodibility will be in upper portions of the Slater Creek drainage where surface disturbance activities are proposed. The text now clarifies that this is the case and that ASCMs and other sediment and runoff control measures will be used to control sediment transport to Slater Creek.

Comment MK 61 – Round 3

Response accepted.

Comment MK 62 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 36. Please provide a discussion on whether the proposed mining operation would affect surface water quality such that designated uses would be affected on the major streams on and adjacent to the proposed permit area. (MDK)

Response MK 62 – Round 1

Revised text as requested.

Comment MK 62 – Round 2

No comment received.

Response MK 62 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 63 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 37. The text describes possible reductions in peak flows and storm volumes. Please describe in the PHC if the proposed mining operation will have any effects on nearby or downstream surface water rights. (MDK)

Response MK 63 – Round 1

Revised text as requested.

Comment MK 63 – Round 2

Response not accepted. The text speaks to impacts to existing reservoirs/water rights on the permit boundary but does not provide a statement as to possible impacts to water rights off or downstream of the permit boundary. Please provide this discussion in the text. (MDK)

Response MK 63 – Round 2

The last paragraph of Section MP.6.1 previously stated:

"…the Brook Mine is expected to have an extremely small effect on surface water quality in the Tongue River and other major streams adjacent to the permit boundary of the Brook Mine. As such, no effect on the designated uses present on major streams adjacent to the permit boundary is expected."

Two sentences have been added to the last paragraph of Section MP.6.1. The first states:

"There is no anticipated impact to water rights downstream of the permit boundary either." (In reference to water quality.)

The second sentence states:

"Additionally, the minimal reduction of any surface water runoff in the upper reaches of drainages in the Brook Mine permit area will not likely have any impact on downstream water rights."

Comment MK 63 – Round 3

Response accepted.

Comment MK 64 – Round 1

Mine Plan, Section MP.6.1 Surface Water, 38. Please add a brief statement to the PHC that if it is determined that the mining operation affects a surface water right, that water right would be replaced with a water source of similar quantity and quality as provided by W.S. § 35-11-415(b)(xii). (MDK)

Response MK 64 – Round 1

Revised text as requested.

Comment MK 64 – Round 2

No comment received.

Response MK 64 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 65 – Round 1

Mine Plan, Section MP.6.1.1 Land Erosion Stability, 39. It is unclear the intent of this section. It seems to be out of place in the mine plan, as it discusses the USLE in the context of only native and reclaimed conditions. Furthermore, no data other than the K factors are presented in Mine Plan Tables (Table MP.6.1). The Reclamation Plan also does not discuss applying the USLE, so it would seem that Section MP.6.1.1 should be removed unless a USLE analysis is completed of pre- vs during- vs postmine erosion predictions. (MDK)

Response MK 65 – Round 1

Section MP.6.1.1 has been removed.

Comment MK 65 – Round 2

No comment received.

Response MK 65 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 66 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 40. It is unclear why reservoirs will be monitored in the operational monitoring program when these features were not sampled for during baseline characterization. If the reservoirs have the potential to be affected by the mining operation they should be sampled prior to mining with this information presented in Appendix D6. (MDK)

Response MK 66 – Round 1

Revised text as requested.

Comment MK 66 – Round 2

Response not accepted. Any reservoir potentially disturbed by mining activities should have a baseline water quality sampled collected with the information presented in Appendix D6. Section MP.6.1 states that Big Horn No. 2 Reservoir, Big Horn No. 14 Reservoir, Permanent Impoundment #1 Reservoir, and Legerski #1 Reservoir will be impacted by mining activities and will be reclaimed. At a minimum, the baseline water quality should be provided for these reservoirs in Appendix D6. RAMACO may also wish to expand the list of reservoirs sampled for baseline water quality to match those listed in Table RP.8-9. (MDK)

Also, there is now a statement on Page MP-49: *All existing reservoirs, stockponds, and proposed reservoirs that will be disturbed by surface mining activities as discussed in Section MP.6.1 will be monitored for relevant discharge through grab samples to ensure that any water released from these reservoirs meets the WDEQ/LQD guidelines discussed above.* It is unclear which WDEQ/LQD guidelines are being referred to. Also, if these reservoirs are going to be discharging, a WYPDES permit would likely be required. Please clarify these items in the text (MDK).

Response MK 66 – Round 2

A commitment has been added to the first paragraph of Section MP.7.1 that states RAMACO will collect water quality data from reservoirs that could potentially be impacted by mining prior to its disturbance and this data will be provided in the Annual Reports. Table MP.7-1provides the expected monitoring locations.

Second, the statement in the third paragraph of Section MP.7.1 referring to discharge and citing aforementioned WDEQ/LQD guidelines was revised. Because these are existing reservoirs, discharge should not be the concern of RAMACO. RAMACO will monitor the reservoirs for the water quality constituents provided in Guideline 8, Appendix 7 for the time during mining upstream to ensure that mining has not impacted the reservoir.

These items should clarify that RAMACO will monitor reservoirs prior to mining operations upstream of the reservoir, and that the water quality monitoring will be to evaluate the aforementioned list as opposed to discharge. RAMACO does not have control of these reservoirs or how they are operated.

Comment MK 66 – Round 3

Response accepted.

Comment MK 67 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 41. Please add the reservoir monitoring locations listed in Table MP.7-1 to Exhibit MP.7.1. (MDK)

Response MK 67 – Round 1

Revised Exhibit MP.7.1 as requested.

Comment MK 67 – Round 2

No comment received.

Response MK 67 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 68 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 42. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

Response MK 68 – Round 1

See response MK

Comment MK 68 – Round 2

Response not accepted. The coordinates were not added to the Table. Please see response to Comment MK 35. Please add the northing/easting State Plane coordinates for the surface water monitoring stations to Table MP.7.1. (MDK)

Response MK 68 – Round 2

Table MP.7-1 has been updated to include the State Plane coordinates.

Comment MK 68 – Round 3

Response accepted.

Comment MK 69 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 43. Please identify what type of water quantity data will be generated from the continuous stage monitoring. For example, will mean daily flow rates and/or peak daily flow rates be estimated, as these would likely be submitted to the LQD in the Annual Report? (MDK)

Response MK 69 – Round 1

Revised text as requested.

Comment MK 69 – Round 2

No comment received.

Response MK 69 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 70 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 44. The text in the last paragraph on Page MP-45 states that water quality samples will be collected from a single station using an ISCO automatic sampler. Please identify in the text which station this is. Also, please explain the rationale for using an ISCO sampler at only one of the four stream monitoring sites. (MDK)

Response MK 70 – Round 1

Revised text as requested. The station equipped with the ISCO automatic sampler was the only station equipped with such a device due to the stations location as well as expected flows. Quarterly grab samples taken at stations upstream of mining disturbances will give an accurate representation of water quality entering the permit boundary. Since the station equipped with an automatic sampler is located near the area in which Slater Creek exits the permit boundary, an automatic sampler allows the operator see if the mining activities of the Brook Mine have an impact on the water quality of Slater Creek as the highest chance water quality is affected will occur during precipitation events. An automatic recorder was not installed at the station downstream of disturbances on Hidden Water Creek because the recorded and modeled flows for the drainage are extremely low. No observable flow had been recorded on any surface water station along Hidden Water Creek, despite precipitation events having occurring. As such, any data collected by an automatic sampler on Hidden Water Creek would occur during extreme precipitation events in which the flows through Hidden Water Creek would likely have high turbidity and be an unrealistic representation of the water quality within Hidden Water Creek.

Comment MK 70 – Round 2

No comment received.

Response MK 70 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 71 – Round 1

Mine Plan, Section MP.7.1 Surface Water Monitoring, 45. The text in the first paragraph on Page MP-46 states that data will be evaluated to determine if any surface water and groundwater interactions exist. It would seem that any interactions should have already been identified during the baseline characterization of the hydrological system on and near the proposed permit area. It does not appear that the permit application discusses surface/groundwater interactions. (MDK)

Response MK 71 – Round 1

Revised text as requested. The monitoring is a continuation of the baseline monitoring sites.

Comment MK 71 – Round 2

Response not accepted. The response states that the text was revised but the same statement remains without any additional explanation. If surface and groundwater interactions are expected to exist then these should have already been discussed in the baseline characterization of the hydrologic system. It does not appear that the

permit application discusses surface/groundwater interactions. Please provide more explanation on this in the text. (MDK)

Response MK 71 – Round 2

The third and fourth to the last sentences in the last paragraph of Section MP.7.1 were edited to state:

"Baseline monitoring has not indicated any interactions between surface water and groundwater. However, surface water data will continue to be compared to groundwater monitoring data to determine if any surface water and groundwater interactions exist that weren't observed in baseline studies."

Comment MK 71 – Round 3

Response accepted.

Comment MK 72 – Round 1

Mine Plan, Section MP.8 Water Use, 46. Please state in the text that all water from surface reservoirs or wells will be used under appropriate permits from the State Engineer's Office (SEO). (MDK)

Response MK 72 – Round 1

Revised text as requested.

Comment MK 72 – Round 2

No comment received.

Response MK 72 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 73 – Round 1

Mine Plan, Section MP.8 Water Use, 47. It is advised that the applicant discuss with the SEO-Interstate Streams Division any implications that water use may have under the Yellowstone River Compact. (MDK)

Response MK 73 – Round 1

Revised text as requested.

Comment MK 73 – Round 2

No comment received.

Response MK 73 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 74 – Round 1

Mine Plan, Addendum MP-6 Subsidence Control Plan, Section MP.6.3 Subsidence Monitoring and Assessment and Section MP-6.4 Subsidence Control and Remediation, 48. The text states that subsidence monitoring would be discontinued if no evidence of subsidence occurred after six months after highwall mining. Please include a clarifying statement that the applicant would remediate subsidence up until bond release is approved, even if the subsidence was detected later than the six months of initial monitoring. (MDK)

Response MK 74 – Round 1

Please see revision to last paragraph of Addendum MP-6.

Comment MK 74 – Round 2

No comment received.

Response MK 74 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 106 – Round 2 (New Comment)

In Section MP.2.1.2 Change House and Equipment Service Shop, on Page MP-8, it states that wash down water will be routed to wastewater impoundment. As stated on Page MP-26, wastewater reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that wastewater reservoirs are not planned. (MDK)

Response MK 106 – Round 2 (New Comment)

The text in Section MP.2.1.2 was not revised. The text in Section MP.5.2 was changed to reflect that wastewater impoundment(s) will be required. Designs for the wastewater impoundment are provided in Addendum MP-2.

Comment MK 106 – Round 3

Response not accepted. The location of the wastewater impoundment is not shown in Exhibit MP.5- l, as the map contains labels for only sedimentation ponds and flood control reservoirs. Exhibit 12 in Addendum MP-2 shows the design for a "typical facilities reservoir". The text in Section MP 5.2 should acknowledge that the location for the wastewater impoundment is not shown on Exhibit MP.5-l and has not been determined yet, but the typical design is shown in Exhibit 12 in Addendum MP-2.

Please make this correction or explain if my understanding of this issue is not accurate. (MDK)

Response MK 106 – Round 3

Text at the end of Mine Plan Section MP.5.2 has been revised, as requested. The text states the typical facilities reservoir location has yet to be determined and a typical design is included in Exhibit 12 of Addendum MP-2.

Comment MK 107 – Round 2 (New Comment)

In Section MP.5.2.1 General Design Criteria, there is a sentence: A discussion regarding the USLE method is provided in Section MP.6.1.1. As per to the response to Comment MK 65, Section MP.6.1.1 has been removed. Please remove the sentence that references Section MP.6.1.1. (MDK)

Response MK 107 – Round 2 (New Comment)

The sentence referencing the previously deleted Section MP.6.1.1 was removed.

Comment MK 107 – Round 3

Response accepted.

Comment MK 108 – Round 2 (New Comment)

In Section MP.6.1 Surface Water, there is a sentence on Page MP-42: *Any surface runoff to come in contact with mining disturbance will be treated in the pits or retained in sedimentation control structures in the vicinity of Hidden Water Creek to meet water quality standards before being discharged from the Permit Area*. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 108 – Round 2 (New Comment)

The text in Section MP.6.1 was not revised. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 108 – Round 3

Response accepted.

Comment MK 109 – Round 2 (New Comment)

In Section MP.6.1 Surface Water, there is a sentence on Page MP-42: *As previously discussed, any runoff coming into contact with mining activities will be captured in a sedimentation impoundment or ASCM to meet water quality standards prior to discharge*

from the Permit Area. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 109 – Round 2 (New Comment)

The text in Section MP.6.1 was not revised. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 109 – Round 3

Response accepted.

Comment MK 110 – Round 2 (New Comment)

In Section MP.6.1 Surface Water, there is a sentence on Page MP-43: *Sedimentation impoundments will capture runoff that has come in contact with mining activities, and will treat the water to meet water quality standards before discharge.* As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 110 – Round 2 (New Comment)

The text in Section MP.6.1 was not revised. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 110 – Round 3

Response accepted.

Comment MK 111 – Round 2 (New Comment)

In Section MP.6.1 Surface Water, there is a sentence on Page MP-44: *Any runoff that does enter disturbed areas will be captured in a sedimentation pond or treated in the trenches to meet water quality requirements before being discharged from the Permit Area.* As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 111 – Round 2 (New Comment)

The text in Section MP.6.1 was not revised. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 111 – Round 3

Response accepted.

Comment MK 112 – Round 2 (New Comment)

In Section MP.12.5 Mine Facilities, the first bullet is for a Sedimentation Pond. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 112 – Round 2 (New Comment)

The bullet item in Section MP.12.5 was not deleted. The text in Section MP.5.2 was changed to reflect that sedimentation reservoirs will be required for mining operations. The designs for sedimentation impoundments are provided in Addendum MP-2.

Comment MK 112 – Round 3

Response accepted.

Comment MK 113 – Round 2 (New Comment)

In Section MP.12.5 Mine Facilities, the second bullet is for a Wastewater Reservoir. As stated on Page MP-26, wastewater reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that wastewater reservoirs are not planned. (MDK)

Response MK 113 – Round 2 (New Comment)

The bullet item in Section MP.12.5 was not deleted. The text in Section MP.5.2 was changed to reflect that wastewater reservoirs will be required for mining operations. The design for the wastewater impoundment is provided in Addendum MP-2.

Comment MK 113 – Round 3

Response accepted.

Comment MK 114 – Round 2 (New Comment)

In Section MP.12.5 Mine Facilities, the third bullet is for a Flood Control Reservoir. As stated on Page MP-29, flood control reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that flood control reservoirs are not planned. (MDK)

Response MK 114 – Round 2 (New Comment)

The text in Section MP.5.3 in the second paragraph was revised to reflect that flood control reservoirs will be required for mining operations within the first five years. The designs of these flood control reservoirs are provided in Addendum MP-2 and the

locations in relation to the permit area are shown on Exhibit MP.5-1. Therefore, the text in Section MP.12.5 was not revised to remove "Flood Control Reservoir" from the list.

Comment MK 114 – Round 3

Response accepted.

Comment MK 115 – Round 2 (New Comment)

Mine Plan Addendum MP-1 commits to getting LQD approval and doing further sediment yield analysis for ASCMs that drain larger than 30 acres, as per LQD Guideline No. 15. It isn't clear from the Hydrologic Control Plan in Exhibit MP 5-1 if any of the currently proposed ASCMs drain more than 30 acres. Please indicate if any of the ASCMs shown in Exhibit MP 5-1 drain more than 30 acres. (MDK)

Response MK 115 – Round 2 (New Comment)

Exhibit MP.5-1 now shows the drainage areas for any ASCMs that drain more than 30 acres. Any ASCMs with drainage areas of more than 30 acres have designs provided in Addendum MP-2.

Comment MK 115 – Round 3

Response accepted.

Comment MK 116 – Round 2 (New Comment)

LQD Guideline No. 15 states that ASCMs should not be used for disturbed or reclaimed areas that are within one-half mile (channel distance) of Class 1 or Class 2 streams. Since the Tongue River and Goose Creek are Class 2 streams, please provide an analysis of the distance of the currently proposed ASCMs on Exhibit MP 5-1 to the Tongue River and Goose Creek. In accordance with LQD Guideline No. 15, more traditional sediment control methods (i.e., sedimentation impoundments) may be needed for disturbed areas that are close to the Tongue River and Goose Creek. (MDK)

Response MK 116 – Round 2 (New Comment)

Exhibit MP.5-1 now shows a half mile buffer from the Tongue River and Goose Creek. In those locations where ASCMs had been proposed within a half mile of either the Tongue River or Goose Creek, more robust methods of sediment control have been implemented (primarily sediment impoundments and collector ditches). Because several locations that require such sediment control measures are within the first five years of operations, sediment impoundments have been designed and these designs are provided in Addendum MP-2. The locations of the sediment impoundments and collector ditches in relation to the permit area are shown on Exhibit MP.5-1.

Comment MK 116 – Round 3

Response not accepted. Thank you for providing the Class 1 and Class 2 Stream1/2 mile buffer on Exhibit MP 5-1 and for showing other forms of sediment control besides ASCMs in the buffer. However, the text should in this section should also state that the mine trenches will also serve as sediment control. This is important to demonstrate since there are some areas, for example in Section 18 near TR-6 and in Section 14 near TR-9A and TR-12 that are within the buffer to the Tongue River but sedimentation ponds will not be used. (MDK)

Response MK 116 – Round 3

The first paragraph of Section MP.5.1 has been revised to include discussion of mine trenches as a form of sediment control.

Comment MK 117 – Round 2 (New Comment)

LQD Guideline No. 15 provides monitoring guidance for ASCMs based on the drainage area upstream of the ASCM. For large receiving streams (drainage area greater than 1.0 square mile), monitoring should include repeated surveys of channel cross-sections and/or upstream and downstream sediment yield stations. Please provide a commitment to conduct this monitoring to evaluate the performance of the proposed ASCMs that drain to large receiving streams. (MDK)

Response MK 117 – Round 2 (New Comment)

A commitment has been added to the last paragraph of Section MP.5.1 that RAMACO will either monitor the stream channel cross sections or will have upstream and downstream sediment yield monitoring stations to ensure the ASCMs are functioning properly in areas that drain to receiving streams with a drainage area of greater than 1.0 square mile.

Comment MK 117 – Round 3

Response accepted.

Comment MK 123– Round 3 (New Comment)

MP.1.3 Acreage to Be Affected Annually. There is a sentence in the second paragraph of this section that is confusing and needs rewritten to improve clarity. The difference between disturbance boundary and affected area boundary would likely be confusing to the public and therefore a clear distinction should be made. The sentence states: The disturbance boundary includes all lands that will be physically disturbed during mining lands that are exclusive of the disturbance boundary but inclusive of the affected area boundary have the potential to be disturbed by mining. It is suggested that this be broken into two sentences: The disturbance boundary includes all lands that will be physically and directly disturbed during mining. The affected area

boundary includes all lands within the disturbance boundary plus additional lands that have the potential to be disturbed by mining.

Response MK 123 – Round 3 (New Comment)

The sentences in the second paragraph of Section MP.1.3 regarding the disturbance and affected area boundaries have been revised for clarity, as requested.

Comment MK 124– Round 3 (New Comment)

MP.8 Water Use. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-1, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response MK 124 – Round 3 (New Comment)

Surface water rights will be obtained through the State Engineers Office and in accordance with the Yellowstone Compact. No changes to the Mine Plan have been made in response to this comment.

Comment MK 125– Round 3 (New Comment)

MP.12.4 Buffer Zones. Assuming Slater Creek is an intermittent stream (Comment MK 29), LQD Coal Rules and Regulations, Chapter 4, Section 2 (r)(ii)(B) states that a buffer zone shall be designated, marked in the field, and on a mine plan map. From Chapter 4, Section 2 (r)(ii)(A), this buffer zone is to be 100 feet. Please designate the buffer zone on Exhibit MP-5.1 and provide a commitment to marking the buffer zone at select locations in the field prior to commencing mining-related disturbance. (MDK)

Response MK 125 – Round 3 (New Comment)

A buffer zone boundary of Slater Creek has been added to Exhibit MP.5-1. A commitment to provide a buffer zone marked in the field prior to commencing mining related disturbance has been placed in the fifth paragraph of Section MP.6.1.

Comment MK 126– Round 3 (New Comment)

MP.25 Alluvial Valley Floors. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this round. Please include a statement in the text of Section MP .25 that there is some minor disturbance proposed within the AVF extent. Please also discuss in the text of

MP.25 whether this disturbance would affect the essential hydrological functions of the AVF. (MDK)

Response MK 126 – Round 3 (New Comment)

Minor disturbance is planned within the Big Horn Mine AVF extent in Section 21of Township 57 North, Range 84 West. The disturbance would include placement of an overburden pile (OB-1) and a sediment pond (SP-1). The disturbance should not affect the essential hydrologic functions of the AVF on the Tongue River as the disturbed area is minimal in size and should not preclude the conveyance of flow. Discussion of the planned AVF disturbance has been added to the second paragraph of Section MP.25.

Comment MuK 32 – Round 1

Mine Plan, 32. Please provide an electronic copy of the groundwater model referenced in Addendum MP-3. In addition, please provide the GIS projection coordinate of the model files that will enable the LQD to plot the model results in GIS for the purposes of producing the CHIA (Cumulative Hydrologic Impact Assessment). The LQD review of the model files might potentially generate additional comments, clarifications or questions. (MK)

Response MuK 32 – Round 1

An electronic copy of the groundwater model will be provided under separate cover. The elements in the model are based on the Wyoming East Central NAD 83 state plane coordinate system. To convert from model Grid to the state plane coordinates the X offset is 1367387.512 and the Y offset is 1915004.382. There is no rotation from the model grid to the state plane coordinate system.

Comment MuK 32 – Round 2

Response conditionally accepted. Because of a version compatibility issue between the software used by the LQD and the mine, the LQD was not able to review the model files. The LQD has contacted Office of Surface Mining (OSM) to explore the options (if any) to update the Groundwater Vistas software to the latest version. OSM is looking into this issue and has not responded during the completion of the review. The LQD would also welcome any suggestions from the mine to resolve this issue. (MK)

Response MuK 32 – Round 2

RAMACO suggests that WDEQ/LQD obtain a "Student License" for Groundwater Vistas. A student license will allow WDEQ/LQD to view the model but not to make any changes to the model. The Brook Mine model cannot be saved to an older version of Groundwater Vistas without causing significant issues in the functionality of the model. The newer versions of Groundwater Vistas contain features vital to the functionality of the model that are not available in older versions of Groundwater Vistas.

Comment MuK 32 – Round 3

Response not accepted. The LQD was able to obtain a newer version of Groundwater Vistas from the OSM. The model files provided in the initial submittal were attempted to run following the written instructions that came along with the model fi les. The steady state model ran and the results for mass balance were similar to the results provided in the application. However, the transient model results do not align with the results presented in the application. Please provide additional assistance and clarification to help the LQD replicate the model results. Depending on the results from this verification run, additional comments may be generated. In addition, please review comment# 74 on the revised model files.

Response MuK 32 – Round 3

During follow up discussions between WWC and Muthu Kuchanur it was discovered that from the time that the original model was developed and the time that the model files were reviewed at LQD, Groundwater Vistas had been updated. The model files provided to LQD were developed in Groundwater Vistas Version 6.43 Build 4. However LQD was using a later version of Groundwater Vistas (Version 6.78 Build 37. When the model files were run on the newer version of Groundwater Vistas they returned erroneous results. WWC downloaded the latest version of Groundwater Vistas (Version 6.80 Build1) available on December 1, 2015 and reconfigured the model to run on the latest version of Groundwater Vistas.

When the model files were configured to run on the later version of Groundwater Vistas, there were a few minor changes in the model results. While most of the differences in the model results were very minor, in order to ensure that the results reported in Addendum MP-3 matched the latest model simulations several pages in Addendum MP-3 were updated with the latest model results. Following are the pages in Addendum MP-3 that have been updated:

Executive summary, Page 4-the modeled drawdown to private wells was updated.

Executive summary, Page 5-the modeled drawdown to private wells was updated.

Section 3.1, Page 30-The version and build number used for the latest version of the model simulations was updated.

Table 4.7-1, Page 49, -The calibration Results were updated.

Figure 4.7-4, Page 54 -Model residuals on the figure were updated.

Table 4.8-1, Page 55-Model sensitivity results were updated.

Table 4.8-2 and Table 4.8-3 Page 56-Model sensitivity results were updated.

Table 4.8-4, Page 57- Model sensitivity results were updated.

Section 4.9, Page 58- To accommodate a more efficient mine plan, in December 2015, RAMACO shifted the slot location between mine blocks 1 and 2 to the north approximately 630 feet. Since the footprint of the mine blocks are still generally similar, this small change in the location of the slot is not expected to significantly alter the groundwater model predictions. As a result, the groundwater model was not adjusted to specifically address this minor change to the mine plan. Additional text was added to this page to address the changes in the mine plan.

Table 4.9-1, Page 69 Maximum modeled drawdowns for adjacent wells were updated.

Section 4.9, Page 72 (Includes Table 4.9-2)-text and table describing pit inflows were updated.

Table 4.10-1, Page 77-Table was updated to include text denoting stress period and time step when values were measured and total inflow value for 5 years into mining were updated.

The latest model files configured to run on Groundwater Vistas Version 6.80, Build 1 are provided on a DVD with these comment responses.

Comment MuK 33 – Round 1

Mine Plan, MP.1.1 Type of Mine, 33. Page MP-1 states, "Below the Tongue River Member is the Lebo shale member of the Fort Union Formation which contains the Masters Seam (Cardno MM&A, October 2013)." This statement is not consistent with Table D5.3-1, Page D5-T1 and other descriptions in Appendix D5. Table D5.3-1 indicates Masters Coal seam is in the Tongue River Member. Please clarify and make appropriate changes throughout the submittal (Example: MP 4.4). (MK)

Response MuK 33 – Round 1

Revised text as requested.

Comment MuK 33 – Round 2

No comment received.

Response MuK 33 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 34 – Round 1

Mine Plan, MP.1.1 Type of Mine, 34. Major coal seams on the Brook Mine include: Dietz (1,2,3), Monarch, Upper Carney, Lower Carney and Masters.". Dietz (1,2,3) coal seam is not included in the description presented in Section D5.3.3.3, Appendix D5. Please clarify: (i) the seams that will be mined by the Brook Mine and (ii) include the description of all the coals seams as appropriate in Appendix D5 and Appendix D6. (MK)

Response MuK 34 – Round 1

Please refer to Mine Plan Section MP.4.4.1 for targeted coal seams at the Brook Mine.

Comment MuK 34 – Round 2

No comment received.

Response MuK 34 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 35 – Round 1

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, Consider using the groundwater model referenced in Appendix D-3 to provide a description for a range of estimates on anticipated dewatering rates/volumes and groundwater inflows to the mine pit. (MK)

Response MuK 35 – Round 1

The text in Section MP.5.8 is to indicate that water entering the pit from either groundwater or surface water will be controlled using sumps and treated prior to discharge.

Comment MuK 35 – Round 2

Response not accepted. Please provide a range of estimates of the expected groundwater inflows to the pit. The intent of this comment is to understand the volume/rate of water that will be dewatered to facilitate mine operations. In addition, please clarify if the groundwater model provides an estimate of this inflow to the pit. (MK)

Response MuK 35 – Round 2

Yes, the amount of water discharging from the drains to simulate mining can be used to estimate how much water would enter into the mine pits during the mining scenarios. The model predicted pit inflow rates are estimated to range between 0.3 gpm and 75 gpm depending on the location of the mine pits. Model predicted pit inflow rates have been added to Addendum MP-3 Section 4.9 (Table 4.9-2). Also, text describing the range of flows has been added to Section MP.5.8.

Comment MuK 35 – Round 3

Response accepted.

Comment MuK 36 – Round 1

Mine Plan, MP.5.8 Mine Pit Dewatering Plan, 36. Please clarify the anticipated effects of the faults on the dewatering plan or groundwater impacts during mining. (MK)

Response MuK 36 – Round 1

Since the water will be collected in a sump, treated, and then discharged, the faults should have no effect.

Comment MuK 36 – Round 2

Response not accepted. It is acknowledged that the water will be collected in a sump. The intent of the comment is to get an understanding on the effects of faults on the inflows to the pit. For example, are the pit inflow rates sensitive to the location and permeability of the faults within the permit boundary? If yes, please provide a range of estimates to account for this sensitivity. (MK)

Response MuK 36 – Round 2

The faults do influence the inflow to the pits. As shown on MP-3 Figures 4.9-12, 4.9-13, and 4.9-14 the faults generally cause a shadow effect where the coals downstream of the faults dry out because the faults prevent efficient recharge of the coal aquifer downstream of the fault. An additional table added to Addendum MP-3 (Table 4.9-2) allows the influence of the faults on the pit inflows to be further evaluated. As shown on Table 4.9-2 the predicted pit inflow rates decline significantly between 2018 and 2019. Between 2018 and 2019 the mining moved closer to the fault located in the northeast side of the permit. The decline in pit inflow is partially due to the fact that the coals immediately downgradient of the fault are drier.

Comment MuK 36 – Round 3

Response accepted.

Comment MuK 37 – Round 1

Mine Plan, MP.5.9 Dewatering Wells, 37. Please provide a brief discussion on the anticipated quality of groundwater removed at various stages of mining. (MK)

Response MuK 37 – Round 1

Revised text as requested.

Comment MuK 37 – Round 2

Response not accepted. In addition to the reference to Appendix D6, please provide a description of any expected variability or trends in water quality of the groundwater removed as different coal seams are mined. Are there any expected groundwater constituents of concern based on Appendix D6? (MK)

Response MuK 37 – Round 2

The third paragraph of Section MP.5.9 now includes a short discussion summarizing information from Appendix D6. The discussion states some of reasons why water

quality could vary during the progression of mining operations. However, the discussion also states that even with the variability, there are no expected groundwater constituents of concern that could cause problems during dewatering and surface containment. The following table is a summary of the information already provided in Appendix D6:

Constituent of Concern	Units	Acute Standard[1]	CRN	MST	CRN-MST
Priority Pollutants					
Arsenic, dissolved	mg/L	0.34	<0.005	<0.005	<0.005 - 0.007
Cadmium, dissolved	mg/L	0.002	<0.001	<0.001	<0.001 - 0.001
Copper, dissolved	mg/L	0.0134	<0.01 - 0.02	<0.01	<0.01
Lead, dissolved	mg/L	0.0646			<0.02
Mercury, dissolved	mg/L	0.0014	<0.001	<0.001	<0.001
Nickel, dissolved	mg/L	0.4682	<0.01	<0.01	<0.01
Selenium, dissolved	mg/L	0.02	<0.005 - 0.005	<0.005	<0.005 - 0.005
Zinc, dissolved	mg/L	0.1172	<0.01 - 0.01	<0.01 - 0.02	<0.01
Non-Priority Pollutants					
Ammonia	mg/L	varies[2]	<0.1 - 7.6	2 - 10.6	1 - 2.3
Chloride	mg/L	860	7 - 27	7 - 30	11 - 24
Fluoride	mg/L	2 [3]	0.5 - 1.9	0.5 - 1.5	1.7 - 2
Laboratory pH	s.u.	6.5-9.0	7.6 - 8.3	7.6 - 8.4	8.3 - 8.4
Nitrate/Nitrite	mg/L	10 [3]	<0.1 - 7.9	<0.1 - 8	<0.1 - 1.2
Barium, dissolved	mg/L	2 [3]	<0.1	<0.1	<0.1
Iron, dissolved	mg/L	0.3 [3]	<0.05 - 0.22	<0.05 - 0.68	<0.05 - 0.21

[1] WDEQ-WQD Rules and Regulations Chapter 1, Appendix B, Aquatic Life Acute Value
[2] WDEQ-WQD Rules and Regulations Chapter 1, Appendix C, Ammonia Toxicity is pH and Temperature Dependent
[3] WDEQ-WQD Rules and Regulations Chapter 1, Appendix B, Human Health Consumption of Fish and Drinking Water

As can be seen in this summary table, most constituents in the Carney and Masters coal seams fall below the acute standard. This table has not been included in the Mine Plan because this is baseline data that does not belong in the Mine Plan. This table has also not been added to Appendix D6 because the groundwater quality constituent concentrations are already summarized in Appendix D6. RAMACO has

committed in the Mine Plan to monitoring groundwater quality during the course of operations in order to ensure that there are no constituents of concern that could cause issues while dewatering the mine pits in potential surface containment.

Comment MuK 37 – Round 3

Response accepted.

Comment MuK 38 – Round 1

Mine Plan, MP.5.9 Dewatering Wells, 38. If groundwater is discharged into a stream channel, anticipated discharge flow rate, water quality, and estimated seasonal discharge of the groundwater should be tabulated. The availability and suitability of this water for downstream water users should also be evaluated. Please clarify if this is an expected mechanism to discharge pumped groundwater. (MK)

Response MuK 38 – Round 1

Revised text as requested.

Comment MuK 38 – Round 2

No comment received.

Response MuK 38 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 39 – Round 1

Mine Plan, MP.5.8 Groundwater Rights, Please include a description on any expected degradation of groundwater quality caused by the mining operation (including lateral flow through spoils) in the adjudicated wells. (MK)

Response MuK 39 – Round 1

Revised text as requested.

Comment MuK 39 – Round 2

No comment received.

Response MuK 39 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 40 – Round 1

Mine Plan, MP.6.2.Groundwater, 40. Please provide a brief discussion on any hydrologic effects caused by anticipated changes in recharge to the aquifers during mining. (MK)

Response MuK 40 – Round 1

Revised text as requested.

Comment MuK 40 – Round 2

Response not accepted. Not able to locate the revision made. Typically, the revisions from other operators are highlighted with bolded text or a different color to enable the reviewer to efficiently review the changes made. Without that tracking mechanism, it is difficult to review the exact revisions. Please consider using a distinct tracking mechanism in the future submittals. (MK)

Response MuK 40 – Round 2

RAMACO does not anticipate significant changes to recharge rates due to disturbance at the Brook Mine. Two sentences have been added to the end of Section MP.6.2.1 that state that RAMACO doesn't expect significant fluctuations in recharge rates, but commits to monitoring groundwater levels according to Section MP.7 and will report any significant fluctuations in groundwater levels that could be attributed to altered recharge rates.

Comment MuK 40 – Round 3

Response accepted.

Comment MuK 41 – Round 1

Mine Plan, MP.6.2.Groundwater, 41. Please provide an assessment of any subsidence effects (Addendum MP-6) on the hydrologic system during operations. (MK)

Response MuK 41 – Round 1

Revised text as requested.

Comment MuK 41 – Round 2

No comment received.

Response MuK 41 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 42 – Round 1

Mine Plan, MP.6.2.Groundwater, 42. Please discuss if there are any expected impacts on groundwater quality caused by subsidence. (MK)

Response MuK 42 – Round 1

Revised text as requested.

Comment MuK 42 – Round 2

No comment received.

Response MuK 42 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 43 – Round 1

Mine Plan, MP.6.3.2 Plan to Mitigate the Impacts on Groundwater, 43. If the quality or quantity of adjudicated water supplies are affected, then an alternative source should be identified as part of the mitigation plan. Please provide a statement to meet this statutory requirement (W.S. § 35-11-415(b)(xii)). (MK)

Response MuK 43 – Round 1

Revised text as requested.

Comment MuK 43 – Round 2

No comment received.

Response MuK 43 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 44 – Round 1

Mine Plan, MP.7.2 Groundwater Monitoring, 44. Please clarify the lack of any shallow monitor wells near Hidden Water Creek, Goose Creek and Tongue River alluvium and if this will be an impediment to completely characterize the groundwater impacts during mining. (MK)

Response MuK 44 – Round 1

Hidden Water Creek has no alluvium therefore, no shallow well can be installed. Goose Creek in the area of the permit is through a reclaimed mine area (pre-law) therefore there is not alluvium. As discussed throughout we will not impact the Tongue River Alluvium. RAMACO will add wells in the Tongue River Alluvium.

Comment MuK 44 – Round 2

Response not accepted. Please provide a more detailed plan for installing the proposed alluvial monitoring well(s). (MK)

Response MuK 44 – Round 2

See comments MK-21,22 (Round 2) responses. Discussion of the potential AVF impacts and proposed alluvial monitoring plan is presented in Mine Plan Section MP.25.

Comment MuK 44 – Round 3

Response accepted.

Comment MuK 45 – Round 1

Mine Plan, MP.7.2 Groundwater Monitoring, 45. Please clarify the possibility of any of the monitor wells shown in Exhibit MP.7-7 being discontinued due to any constraints in the proposed-mine plan (example: mined through). (MK)

Response MuK 45 – Round 1

Revised text as requested.

Comment MuK 45 – Round 2

No comment received.

Response MuK 45 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 46 – Round 1

Mine Plan, MP.8 Water use, 46. Page MP-47 states, "Industrial water will be obtained from groundwater wells or from water collected in sediment and flood control reservoirs." Please clarify if the groundwater wells mentioned in this statement are wells that will be exclusively used as industrial supply wells or if they are same as dewatering wells. (MK)

Response MuK 46 – Round 1

Revised text as requested.

Comment MuK 46 – Round 2

Response not accepted. Please provide additional description on the source aquifer for the proposed industrial supply wells. (MK)

Response MuK 46 – Round 2

Discussion regarding wells as a water source was removed from Section MP.8. Due to the coal seams being mostly dry and the only reliable aquifers being very deep, RAMACO will rely on surface water rights and water collected in the sediment and

flood control reservoirs and other sources for supplying the quantities of water needed for industrial purposes. Refer to Table MP.8-1 for a summary of water quantity obtained from each source.

Comment MuK 46 – Round 3

Response accepted.

Comment MuK 47 – Round 1

Mine Plan, MP.8 Water use, 47. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a discussion comparing the reported water use by other mines of similar size in the Powder River Basin.

Response MuK 47 – Round 1

No record of reported water use was discussed in the annual reports submitted to WDEQ for several different mines within the Powder River Basin. As such, a comparison was unable to be made.

Comment MuK 47 – Round 2

Response not accepted. The SEO requires a submittal of the water use by the other mines. In addition, the coal review reports by the BLM also provide a summary of water use. Example: AECOM, Inc., 2014, Update of the Task 1B Report for the Powder River Basin Coal Review – Current Water Resources Conditions, prepared for Bureau of Land Management High Plans District Office and Wyoming State Office, http://www.blm.gov/pgdata/etc/medialib/blm/wy/programs/energy/coal/prb/coalreview/phase2/Task1B.Par.91805.File.dat/Task1B.pdf.

Response MuK 47 – Round 2

As discussed in the meeting between WDEQ and WWC on September 1, 2015, the AECOM report has been added as a reference to the Mine Plan. Water usage for the Brook Mine has been reevaluated and presented in Table MP.8-1. The fourth paragraph of Section MP.8 summarizes the expected water usage by the Brook Mine per year. This paragraph states that the approximate annual water usage at the Brook Mine will be 368 acre-feet which is on the lower end of water usage ranges provided in the report (300 to 920 acre-feet).

Comment MuK 47 – Round 3

Response accepted.

Comment MuK 48 – Round 1

Mine Plan, MP.8 Water use, 48. Page MP-48 states, "It is estimated that the total water use will be approximately 400 million gallons per year." Please provide a comparison of

this estimated total water use against the various estimated water sources available during mining (Example: from dewatering wells). It will be very helpful to provide a discussion on contingency measures during extreme wet/dry years or if the proposed mine plan does not require extensive dewatering. (MK)

Response MuK 48 – Round 1

RAMACO is currently working to solidify the necessary water right for this water. The sources and associated amounts are in discussions and therefore not presented at this time.

Comment MuK 48 – Round 2

Response not accepted. The information will be reviewed as soon as it is made available to the LQD. (MK)

Response MuK 48 – Round 2

Table MP.8-1 has been added to the Mine Plan to outline the specific water uses with estimated quantities projected at the Brook Mine. Table MP.8-1 also shows the expected volume of water from each source. The fourth paragraph of Section MP.8 has been revised to state that the Brook Mine will use approximately 120 million gallons per year with an expected variability of plus or minus 20 percent. A statement was added to the fourth paragraph of Section MP.8 that enough water is available from the surface water rights that any variations in the quantities from other sources can be covered by the surface water rights.

Comment MuK 48 – Round 3

Response accepted.

Comment MuK 49 – Round 1

Mine Plan, MP.8 Water use, 49. Please clarify if there is any expected variability in this projected water use (example: is it closely related to the mine plan). (MK)

Response MuK 49 – Round 1

Revised text as requested.

Comment MuK 49 – Round 2

Response not accepted. The text indicates that the total water use will be approximately 400 million gallons per year. Please provide at least a range of expected variability in this projected annual water use. (MK)

Response MuK 49 – Round 2

The water usage at the Brook Mine has been reevaluated. Table MP.8-1 has been added to the Mine Plan which summarizes the expected quantities of water usage per day by specific use. This table shows that the Brook Mine is expected to use approximately 328,200 gallons per day. The fourth paragraph of Section MP.8 states that this equates to approximately 120 million gallons per year (significantly less than originally reported). The text in the fourth paragraph of Section MP.8 also states that the water usage has an expected variability of plus or minus 20 percent.

Comment MuK 49 – Round 3

Response accepted.

Comment MuK 50 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 50. Page Addendum MP-3-19 states, "Since, most of the wells within the modeled domain are stock wells with intermittent pumping and completed in geologic strata below the Masters Coals, they are relatively inconsequential to the groundwater system modeled in this report." Please provide a Figure (or reference) to show these wells, their depths and discuss on why they are hydrogeologically isolated from the effects of the proposed mine. (MK)

Response MuK 50 – Round 1

All the groundwater rights are tabulated within Appendix B of the adjudication volume and Exhibits 5 and 8 in the adjudication volume show the locations of each respective groundwater right. Please note that adjudication Exhibits 5 and 8 include monitor wells in addition to stock and domestic wells so all the wells shown on the exhibits are not necessarily wells that are being used as water supply wells. In fact, almost all the completed water wells shown on Exhibit 5 of the adjudication volume within the Brook Mine permit area are actually monitor wells. The Cross Sections presented in Exhibit 2 of Addendum D5-3 show the depth of the coal seams at various locations within the Brook Mine Permit. For comparison, the depths of each well are listed in the tabulation in Appendix B of the adjudication volume.

The statement on Page MP-3-19 "they (the wells) are relatively inconsequential to the groundwater system modeled in this report" means that the wells are not believed to be significant stressors to the groundwater system because of their relatively low pumpage rates. This statement should not be interpreted to mean that all of the stock and domestic wells in the area are hydrologically isolated from the coals proposed for mining within the Brook Mine Permit area. In fact, Section 4.9 of Addendum MP-3 specifically describes 26 wells that, based on their depths and locations, are likely completed within the coals. The expected impacts to these wells were assessed as part of the modeling exercise. Based on a comparison between the reported depths in the water rights tabulation in Appendix B of the adjudication volume and the geologic cross sections in Addendum D5-3, the other stock and domestic wells in the area were

determined to be completed either in the Tongue River alluvium, or deeper strata below the Carney coal and do not have a direct hydrologic connection to the coals proposed for mining in the Brook Mine and were not specifically evaluated in the groundwater model.

Along the eastern edge of the model domain there are a large number of CBM wells and, based on available data presented in the water rights tabulation in Appendix B of the Adjudication volume, these wells are likely pumping water from the Carney and Masters coal seams. The impacts from the CBM wells are described in detail within later sections of the report. However, the text on page MP-3-19 does not speak to the CBM wells. Minor changes to the text on page Addendum MP-3-19 and additional explanatory text have been added to this page to provide further clarification.

Comment MuK 50 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 50 – Round 2

Section 2.2 of Addendum MP-3 had previously been updated to incorporate this comment response. Additional explanatory text has also been added to Addendum MP-3 Section 2.3 to further incorporate the context of this response into the Permit Application.

Comment MuK 50 – Round 3

Response accepted.

Comment MuK 51 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 51. Page Addendum MP-3-20 states, "The faults are significant in lateral extent and form natural no flow boundaries". Please provide a discussion (or refer to a discussion) on how these faults were determined to be no flow boundaries. (MK)

Response MuK 51 – Round 1

Faulting within the permit area was mapped by B.E. Barnum on the USGS Monarch Quadrangle. As noted in Section D5.3.2, Barnum indicates fault displacements on the order of 50 feet within the mine area. Lithologic logs provided in Addendum D-5-3 demonstrate that the dominating lithology in the column is claystone and coal thicknesses are less than 20 feet. This offset geology from faulting results in a claystone hanging or footwall adjacent the coal aquifer and therefore discontinuity of the aquifer and an assumed hydrologic flow boundary.

Comment MuK 51 – Round 2

Response not accepted. It is appreciated and acknowledged the note of lithologic logs. In addition, please clarify or substantiate if there is any hydrologic evidence to support the interpretation that the faults are no flow boundaries (Example: water levels, water quality or other hydrologic evidence). This will increase the validity of the no-flow assumption. (MK)

Response MuK 51 – Round 2

In addition to the lithological evidence discussed in the previous response that supports treatment of the faults as no flow barriers, comparisons of water levels in coal monitor wells on either side of the fault also demonstrate that the faults serve as no flow barriers. Exhibits D6.2-2 and D6.2-3 in Addendum D6 illustrate the potentiometric surface in Masters and Carney coal seams, respectively. As shown on Exhibits D6.2-2 and D6.2-3, within the northeastern portion of the Brook Mine permit area there are two monitor well clusters that straddle both sides of a fault (578408 and 578409). In the case of the Masters coal, the measured water level in the monitor well on the upper side of the fault (578408-MST) is 173 feet higher than the water level measured in the monitor well completed on the downblock side of the fault (578409-MST). Similarly, the measured water level difference across the fault in the Carney monitor wells is approximately 180 feet. The change in potentiometric head between the monitor wells on both sides of the fault is significantly higher than would be expected due to the natural gradient in this area. Therefore, the variation in the measured potentiometric head across the fault demonstrates that it does serve as a hydraulic barrier. Additional text has been added to Addendum MP-3 Section 2.4.1 to more fully describe the effects that the faults have on the conceptual flow model.

Supplemental analysis of water quality on opposite sides of the faults has been conducted to note any difference in water quality that would indicate that the faults serve as no-flow barriers. This analysis and discussion has been added to Addendum MP-3 in Section 2.4.1.

Comment MuK 51 – Round 3

Response accepted.

Comment MuK 52 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 52. Please clarify the reason for not estimating vertical hydraulic conductivity of the interburden using an aquifer test. (MK)

Response MuK 52 – Round 1

Response to this comment is partially clarified in responses to MK's Comments 18 and 19 above. During the aquifer test conducted at the 578409 well cluster no response was observed across the interburden, therefore, the vertical hydraulic conductivity of

the interburden was too low to measure in the aquifer test. Furthermore, the static water levels in the Masters and Carney coal seams are different which demonstrates that the hydraulic conductivity of the interburden is very low. Therefore, literature values were utilized and adjusted within reasonable bounds to improve model calibration.

Comment MuK 52 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 52 – Round 2

The context of this response was incorporated into Addendum D6-8 "Pumping Test Report." The context was added into Section D6-8.4 "Determination of Aquifer Parameters."

Comment MuK 52 – Round 3

Response accepted.

Comment MuK 53 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 53. Page Addendum MP-3-25 states, "With no unnatural stresses on the system …" Please provide a discussion of the CBM impacts on the water levels. It appears that the hydrographs presented in Appendix D6 do not show the impacts of CBM. (MK)

Response MuK 53 – Round 1

There are multiple CBM production wells located along the eastern side of the groundwater domain. In order for the CBM producers to be able to produce gas it is necessary to significantly lower the water levels in the coal to release the gas in the coal fractures. CBM production began in this area around 1999. Therefore, it was conservatively assumed that CBM production has already resulted in lowering the water levels in the coal aquifers to the top of the coal aquifer along the eastern edge of the model domain and the general head boundaries were set accordingly to simulate this effect. Even though water level data in the coal aquifer prior to CBM production is limited because of the lack of monitor well data, prior to CBM production, the potentiometric head in the coal was estimated to be significantly higher than the top of coal.

The hydrographs presented in Appendix D6-9 do not show the impacts of CBM because they show water level changes over a one year period roughly 13 years after CBM production began in the area, and if the wells were going to be impacted by CBM, it is likely that they have already been impacted. Please note that the model assumed that CBM production would continue into the future resulting in the water levels in the coal being maintained at unnaturally low levels. Therefore, the model has

conservatively estimated the combined impacts from both CBM and the proposed coal mining activities. Currently, a large majority of the CBM wells are being plugged and abandoned which may result in higher than predicted water level recovery rates in the coal aquifer.

Text edits were made to page MP-3-25 to help clarify the discussion.

Comment MuK 53 – Round 2

No comment received.

Response MuK 53 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 54 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 54. There are two sub-sections for recharge, Section 2.5.3 and Section 2.6.1. Please clarify/consolidate. (MK)

Response MuK 54 – Round 1

The two subsections have been combined into one subsection under Section 2.6.1.

Comment MuK 54 – Round 2

No comment received.

Response MuK 54 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 55 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 55. Page Addendum MP-3-26 states, "… drain cells were placed in the model to simulate seeps from the outcrops." Please provide a discussion on the evidence for seeps (or reference) observed during field surveys. Were there any field data collected on the location and flow rates of these seeps? (MK)

Response MuK 55 – Round 1

Evidence of seeps from outcrops can be seen in Color Infrared Imagery (CIR), which is included in the permit as Exhibit D11.1-1. The areas of seepage are manifested on the CIR imagery as areas with more vegetation. Evapotranspiration from the vegetation growing along the seep removes all the water before it emanates from the formation into the drainage. Therefore, no measurements of the seepage rate at the outcrops were possible or are available. Additional discussion explaining the need for drain cells within the model is provided in Section D6.2.2. Also, text was added to Section D6.2.2 to clarify that no field flow measurements were available.

Comment MuK 55 – Round 2

Response conditionally accepted. Please include the discussion on CIR into the permit application (MK)

Response MuK 55 – Round 2

Additional text describing the seeps was added to Addendum MP-3 Section 2.6 to incorporate the context of this response.

Comment MuK 55 – Round 3

Response accepted.

Comment MuK 56 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 56. Page Addendum MP-3-27 states, "River cells from MODFLOW's river boundary conditions package were placed in the model to simulate the Tongue River and Goose Creek." Please provide a conceptual discussion supported by field observations on the type/nature of interaction of these streams with groundwater (Gaining stream vs. losing stream). (MK)

Response MuK 56 – Round 1

As described in Section 2.3 of MP-3, the dip of the strata in the project area is generally east-southeast into the Powder River Basin and the groundwater flow direction follows this trend regionally. As such, the Tongue River comes into contact with the coal seams of interest near the updip side of the coal seams. Interactions between the surface water and groundwater occur at those points where permeable formations sub-crop into alluvial/surface water bodies. Both the Carney and the Masters coal subcrop under the Tongue River near the western edge of the model domain. Conceptually these subcrops are the only places where the coals would be in contact with the surface water. Section 2.3 of Addendum MP-3 describes the conceptual groundwater flow in some detail.

As described in Addendum MP-3 Section 2.3, the Carney coal is largely dry to the north and west of its subcrop into the Tongue River alluvium and becomes saturated at an elevation just above the elevation where it subcrops beneath the Tongue River alluvium. Therefore it is likely that the Carney Coal would lose water to the Tongue River alluvium. The potentiometric surface in the Masters Coal is roughly the same as the potentiometric surface of the Tongue River where the Masters coal subcrops beneath it. A review of the steady state groundwater model shows that where the River boundary cells are immediately above the Masters Coal the net effect is that the River boundary cells input approximately 3.2 gpm into the model. Conversely, near the upper and lower Carney Coal/Tongue River outcrops the River cells are taking roughly 0.16 gpm out of the model. Since the coal outcrops occur beneath the Tongue River there is no way to field verify these flows but conceptually they do seem reasonable.

The river boundary cells extend to the bottom of the layer in which they are placed as discussed in response to comment MUK 74 and MUK 84. The River boundary cells were placed in Layer 1 to the confluence of Goose Creek and the Tongue River which extends east of the area where the Carney Coal would be in communication with the Tongue River alluvium. Due to the fact that the River boundary cells extend to the bottom of the layer they do provide a conduit for the River to provide recharge into the Carney Coal even though the River would be physically separated from the coal by multiple zones of low permeability shales. The estimated recharge occurring in this area from the Tongue River to both layers 1 and 2 is approximately 8 gpm. The discharge into the coals is likely conservatively overestimated and not all of the 8 gpm would necessarily end up in the coal as some of it also discharges to layer 1. As such, the model conservatively estimates that up to 11.2 gpm would be discharged from the river to the coals or overburden between the Carney Coal and the Tongue River.

The strata located above the coal seams of interest is generally claystone with low permeability as discussed in MP-3 Section 2.2. Therefore, interaction of groundwater between these units and the Tongue River or Goose Creek is very limited. Within the model domain, the Tongue River Alluvium does have large deciduous trees and other vegetation immediately adjacent to the river. Conceptually, evapotranspiration from the vegetation along the Tongue River would indicate that through the model domain the Tongue River is a losing Stream. Throughout most of the model domain where the Tongue River is present, there low permeability overburden strata between the Tongue River alluvium and the coal seams which hydrologically isolate the Tongue River from both the Masters and the Carney coal seams. Since Goose Creek is located in the eastern portion of the model domain where the coal is significantly below the alluvium and the clay intervals are even thicker, the Goose Creek alluvium is also hydrologically separated from the Masters and Carney Coals. The Goose Creek alluvium would likely see similar losses to evapotranspiration that would be observed in the Tongue River alluvium.

Comment MuK 56 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 56 – Round 2

Text from this response has been incorporated into Addendum MP-3 Sections 2.3 and 4.7.2 as appropriate.

Comment MuK 56 – Round 3

Response accepted.

Comment MuK 57 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 57. Please provide a discussion on any contribution of groundwater baseflow to the major surface water bodies within the permit boundary. (MK)

Response MuK 57 – Round 1

As described in the response to comment MuK 56, conceptually, very little groundwater base flow from the Carney and Masters coal seams are expected to contribute to the surface water bodies within the permit boundary. The mass balance table provided in response to comment MuK 73 demonstrates that much more water is expected to enter the groundwater system from the surface water bodies (river cells) than is contributed to the surface water bodies from groundwater baseflow.

Comment MuK 57 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 57 – Round 2

The context of this response has been added to Addendum MP-3 via additional text to address comments MuK 56 and MuK 73. Specifically, text additions to Addendum MP-3 Section 4.10 include the context of the Round 1 response.

Comment MuK 57 – Round 3

Response accepted.

Comment MuK 58 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 58. In section 3.2 MODFLOW Input Files, was aerial recharge used as an input file? Please clarify if evapotranspiration was considered as a discrete input or lumped into net aerial recharge. (MK)

Response MuK 58 – Round 1

Yes, the recharge package was used as an input file. Section 3.2 of Addendum MP-3 was updated to include a discussion of the recharge package. The evapotranspiration (ET) package was not utilized in the model. To address the effects of ET, the recharge rates were adjusted down in proportion to the estimated losses created by ET. Within most of the model domain where evapotranspiration would occur, the low permeability overburden between the surface and the coal seams of interest provide a hydrologic barrier so the evapotranspiration was ignored in these areas.

Comment MuK 58 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 58 – Round 2

Addendum MP-3 Section 4.2.2 was updated to incorporate the context of the Round 1 response.

Comment MuK 58 – Round 3

Response accepted.

Comment MuK 59 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 59. Page Addendum MP-3-31 states, "Layer 1 – represents the coal overburden". Please clarify if the alluvial aquifer was included in the model. Please provide justification for not considering the alluvial aquifer in the model. (MK)

Response MuK 59 – Round 1

As described in the responses to comments MuK 56 and MuK 57, the only place within the model domain where there is potential for interactions between any alluvial aquifers and the coal seams of interest is where the coal is directly below the Tongue River alluvium or Slater Creek colluvium. Where the coal is in direct contact with alluvium/colluvium, layer 1 (the coal overburden) was assigned a higher vertical hydraulic conductivity to allow the layer to better emulate the alluvial/colluvial aquifer in this location. This zone of higher hydraulic conductivity in layer 1 is depicted on Addendum MP-3 Figure 4.2-1. Groundwater Vistas does not allow discontinuous layers throughout the model domain so this allowed the alluvium/colluvium to be effectively be modeled without the need to add an additional layer across the top of the entire model domain. This helped to improve the computational efficiency of the model. Since the overburden has a very low hydraulic conductivity and hydrologically separates the coals from the other alluvial/colluvial deposits within a large portion of the model domain, there is no reason to model any additional alluvial/colluvial deposits. To help clarify this comment Figure 4.2-1, was prepared and sections 2.5 and 4.2 of MP-3 have been updated.

Comment MuK 59 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 59 – Round 2

With the addition of the text to address comments MuK 56 and Muk 57 as well as the text added to Addendum MP-3 Section 4.2.1, the context of this comment has been incorporated into Addendum MP-3.

Comment MuK 59 – Round 3

Response accepted.

Comment MuK 60 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 60. Page Addendum MP-3-31 states, "Layer 3- Carney Interburden. This interval is generally of low to very permeability in the western portion of the Project Area". Please clarify how the areas where Layer 3-Carney Interburden is absent are treated in the groundwater model. (MK)

Response MuK 60 – Round 1

Ground Water vistas does not allow discontinuous layers. Therefore, Layer 3 is continuous across the entire model domain. Where the coal seam coalesces on the east portion of the model, the Layer 3 interburden was modeled as coal by setting hydraulic properties of the layer equivalent to the values of the overlying and underlying coal seams. Additional text has been added to Section 4.2.1 of Addendum MP-3 to further describe how the hydraulic conductivities were assigned to layer 3.

Comment MuK 60 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 60 – Round 2

The context of the Round 1 response has been incorporated into Addendum MP-3 Section 4.2.1.

Comment MuK 60 – Round 3

Response accepted.

Comment MuK 61 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 61. Please include a discussion of the thickness of all model layers. (MK)

Response MuK 61 – Round 1

Addendum MP-3 Section 2.5 describes the thickness of the various coal seams. Additional text has been added to MP-3 Section 4.1 to generally describe the thickness of each layer. Following are the modeled thicknesses for each layer:

- Layer 1-The thickness for this layer varies throughout the model domain. Near the western side of the model the layer is often absent where all the strata geologically younger than the Carney coal has been eroded off. These areas are generally represented as no flow cells in the model. Within the eastern portion of the model Layer 1 can be substantial. In the model the maximum thickness of Layer 1 in the eastern side of the model domain was approximately 1,100 feet.

- Layer 2-The Upper Carney coal was modeled with a constant thickness of 7 feet throughout the model.

- Layer 3-The Carney coal interburden layer varied in thickness from 4 feet up to 15 feet within the active portion of the model.

- Layer 4-The Lower Carney coal was modeled with a constant thickness of 8 feet within the model.

- Layer 5 The Carney/Masters coal interburden layer varied in thickness from 4 feet up to 107 feet within the model.

- Layer 6-The Masters coal was modeled with a constant thickness of 6 feet within the model.

Comment MuK 61 – Round 2

Response not accepted. It is acknowledged that Section 4.2.1 provides the thickness of the model layers. Also, the response states, "*Addendum MP-3 Section 2.5 describes the thickness of the various coal seams.*" Addendum MP-3, Section 2.5 does not describe the thickness but it is a section on hydraulic properties. Please clarify. (MK)

Response MuK 61 – Round 2

The previous sections reference was incorrect. Addendum MP-3 Section 2.5.1.3 provides a statement regarding the thickness of the Carney Coal. Addendum MP-3 Section 2.5.1.4 provides a statement regarding the thickness of the Masters Coal.

Comment MuK 61 – Round 3

Response accepted.

Comment MuK 62 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 62. Please include a justification for not considering the underlying zones beneath the Masters coal seam in the model. (MK)

Response MuK 62 – Round 1

The Masters coal is underlain by the Lebo Shale. The Lebo Shale is a thick (Appendix D5 Section D5.2.3), regional confining interval in the project area as described in Mine Plan Addendum MP-3 Section 2.1. There are no aquifer units identified within the model domain within the Lebo Shale with direct hydrologic connection to any of the elements of the model. Since the Lebo Shale is a regional confining unit, if it had been included in the groundwater model, it would have been assigned hydraulic parameters typical of a shale interval (very low hydraulic conductivity) and it would have essentially been a no flow barrier to the more permeable Masters coal above it. Groundwater Vistas treats the bottom of the model as a no flow boundary. Therefore, the Lebo Shale is for all practical purposes included in the model as a confining interval with the way the model is currently defined.

Comment MuK 62 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 62 – Round 2

The second to last paragraph in Addendum MP-3 Section 4.1 incorporates the context of the Round 1 response.

Comment MuK 62 – Round 3

Response accepted.

Comment MuK 63 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 63. Please provide appropriate cross section(s) of the model grid overlaid with the drill hole data collected during baseline characterization. This will help the evaluation of the adequacy of model layer thicknesses against the stratigraphic field data. (MK)

Response MuK 63 – Round 1

As noted in Addendum MP-3 Section 4.1, the Groundwater model layers were developed from a 3D geologic model developed from drill hole data within the project area developed for the purposes of making volumetric coal estimates. Minor updates to the surfaces were made where new data provided by additional exploration drilling was completed. An additional figure was developed (Addendum MP-3 Figure 4.1-3) and included in Addendum MP-3 that depicts actual cross sections cut from the groundwater model. Addendum D5-3 of Appendix D5 includes geologic cross sections with drill hole data that can be compared back to the actual cross sections included in Figure 4.1-3 of Addendum MP-3.

Comment MuK 63 – Round 2

No comment received.

Response MuK 63 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 64 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 64. Please clarify how the layers were modeled to represent the confined/unconfined aquifer types. (MK)

Response MuK 64 – Round 1

Groundwater Vistas has a "layer type" control that was set to #5: Confined/Unconfined, which allows the model to determine whether to use storativity or specific yield for the storage coefficient based on the elevation of the water elevation vs. formation tops. Groundwater Vistas handles the aquifer type classification without further inputs.

Comment MuK 64 – Round 2

Response not accepted. It is acknowledged and noted that GW Vistas handles it in an automated mode. Please provide a description on if there were any additional checks conducted on the results from the groundwater model to verify if the aquifer type used by GW Vistas is consistent with the conceptual model and field data. Example discussion: Are the deeper layers confined for the entire simulation or do they change from confined to unconfined due to mine operations? (MK)

Response MuK 64 – Round 2

Within the model domain the coal aquifers are relatively thin, ranging in thickness from 4 to 15 feet. Because the coal aquifers are relatively thin, during the model simulation the coals were typically either confined or dry. The only place where unconfined conditions occurred in the groundwater model simulations were near the outcrops or in the cells immediately adjacent to cells that went dry during the modeling simulations. Similarly, during mining simulations the cells immediately next to the mining areas became unconfined as well. When the water level in a cell drops below the top of the layer, Groundwater Vistas treats that cell as an unconfined aquifer which means that instead of using the specific storage term to calculate the amount of water in storage, the program uses specific yield to calculate the amount of water in storage. The total area of unconfined coal aquifer was relatively small as compared to the portion of the aquifer that was dry or fully saturated. Due to the relatively small area of potential unconfined aquifer, no specific analyses were conducted to determine whether changes in the specific yield in the unconfined aquifer would affect model calibration.

Comment MuK 64 – Round 3

Response accepted.

Comment MuK 65 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 65. In addition to model calibration, please provide justification for the recharge rates applied in the model including any literature references. (MK)

Response MuK 65 – Round 1

The initial recharge rates utilized in the model were initially estimated based on a USGS study (Water-Resources Investigations Report 01-4278) conducted on the eastern side of the Powder River basin and the Black Hills area. The study entitled, "Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 1931-98." was prepared by J.M. Carter and D.G. Driscoll. In the study Carter and Driscoll reported recharge rates varying from 0.04 inches per year to 2.93 inches per year. The 2.93 inch per year recharge rate was reported within the Madison limestone formation outcrops in the Black Hills while the lower range of recharge rates reported by Carter and Driscoll were estimated for areas in the eastern periphery of the Powder River Basin where the precipitation and soil types are similar in nature to the Brook Mine Permit area. Since calibrated recharge rates in the key recharge areas (the coal outcrops and the scoria outcrops) were within the range of values developed by Carter and Driscoll, the recharge rates used in the model are considered reasonable. Please note that the recharge rate throughout Layer 1 is much lower than the range of recharges developed by Carter and Driscoll. This is reasonable because much of Layer 1 has no hydrologic connection to the underlying coal seams. Additional justification for recharge rates applied in the model is discussed in response to comment BJ57.

Comment MuK 65 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 65 – Round 2

Addendum MP-3 Section 4.2.2 has been updated to incorporate the context of the Round 1 response.

Comment MuK 65 – Round 3

Response accepted.

Comment MuK 66 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 66. Page Addendum MP-3-33 states, "Recharge is applied within the modeling software by applying the recharge to the highest active layer." Please clarify the presence of any modeled 'dry cells' in the model and the influence of applying the recharge to the layers below the dry cells. (MK)

Response MuK 66 – Round 1

As noted in the responses for comments MuK 59 and MuK 60, Groundwater Vistas does not allow for discontinuous layers across the model domain. Along the north and the west sides of the model there is a good portion of the model domain where the upper layers have been eroded off and do not actually exist. These areas of erosion were accounted for using no flow cells. As shown on Figures 4.4-1 through 4.4-4 of Addendum MP-3, the no flow cells in the top layer are the largest in areal extent while each underlying layer has a slightly decreased areal extent of no flow cells. In this case the no flow cell distribution was adjusted to match the outcrop of each layer. The fact that the software applies the recharge to the highest active layer was taken advantage of during the modeling process, since it is an effective way to apply recharge to an outcropping layer which is under another layer that is eroded away but due to software limitations is still present in the model.

Because CBM operations have generally removed most of the water from the coal seams, there are some locations within the model domain where dry cells during the modeling have caused cells in layer 1 to go dry and the recharge is applied to the next active layer below. While this could be problematic if a high recharge rate were assigned to the model cells, generally throughout the model domain the recharge rate is very low. Therefore, this results in a very minor amount of water coming into the model and did not significantly affect the model calibration.

Comment MuK 66 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 66 – Round 2

Addendum MP-3 Section 4.2.2 has been updated to incorporate the context of this response.

Comment MuK 66 – Round 3

Response accepted.

Comment MuK 67 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 67. Table 4.2-3. lists model porosity values. Typically, MODFLOW (flow model) does not use porosity in its calculations. Please clarify the need for this input parameter. (MK)

Response MuK 67 – Round 1

Modflow does not utilize porosity as part of its calculations. However, other modules included in the Groundwater Vistas package such as MODPATH do utilize porosity. In the case of this model, no MODPATH simulations were conducted. Therefore, the porosity term as put into the model has no impact on the calculations. However, porosity is a hydraulic parameter of the aquifer and may be important for future modeling simulations, therefore, the porosity values developed for each aquifer/aquitard unit will be left in the model report. Minor changes to the text in Addendum MP-3 have been made to clarify the role of porosity in this model.

Comment MuK 67 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 67 – Round 2

The context of the Round 1 response was incorporated into Addendum MP-3 Section 4.2.3 as part of the first round of comment responses.

Comment MuK 67 – Round 3

Response accepted.

Comment MuK 68 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 68. The faults are not modeled in Layer 1. Please clarify the procedure for determining the vertical extents of the faults in the model. (MK)

Response MuK 68 – Round 1

The composition of Layer 1 is predominately claystone. Because Layer 1 is not composed of aquifer material and because the hanging and footwalls are composed of strata with similar hydraulic properties, displacement due to faulting does not substantially change the flow through the aquitard and placing Horizontal flow barriers in the model in layer 1 was not necessary.

Comment MuK 68 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 68 – Round 2

Addendum MP-3 Section 4.4.1 was updated to incorporate the context of the Round 1 response.

Comment MuK 68 – Round 3

Response accepted.

Comment MuK 69 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 69. Please provide the input parameters used to model the horizontal flow barriers in the model and discuss their technical reasonableness. (MK)

Response MuK 69 – Round 1

Horizontal Flow Barriers were used in the model to simulate no-flow boundaries created by faulting within the project area. Horizontal flow barriers require two input parameters in Groundwater Vistas including wall thickness and hydraulic conductivity. The input parameter used in the model for wall thickness was 10 feet and a hydraulic conductivity of 1.0 x 10^-5 ft/day was used. The horizontal flow barrier parameters as applied will essentially limit all but a very minor amount of flow across the barrier. As described in the response to comment MuK 51, the coal seams within the project area are relatively thin as compared to the fault offsets so it is reasonable to assume that the faults will significantly impede flow in the aquifer units.

Comment MuK 69 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 69 – Round 2

Addendum MP-3 Sections 4.4.2, 4.4.3, and 4.4.4 were updated to incorporate the context of the Round 1 response.

Comment MuK 69 – Round 3

Response accepted.

Comment MuK 70 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 70. Page Addendum MP-3-40 states, "As the current, post-CBM potentiometric surface is considered the static level……." Please provide the implications of this assumption, on the model calibration of hydraulic parameters and the mode predicted hydrologic impacts (over estimation of drawdown vs. underestimation) (MK)

Response MuK 70 – Round 1

Addendum MP-3 Sections 4.8.1, 4.10, and 4.11 all discuss the implications of CBM impacts. In addition, the response to comment MuK 53 also discusses CBM impacts to water levels. As discussed in the response to comment MuK 53, the model conservatively assumed that CBM operations have lowered the water levels in the eastern portion of the model domain to a level near the top of the coal seams. To simulate this drawdown, the elevations of each general head boundary on the east side of the model were set at an elevation just above the top of the coal seam. The general head boundaries elevations remained the same in both the steady state and the transient models. Essentially, this means that the model operated under the assumption that the post CBM impacts were permanent prior to and after the Brook Mine mining activities.

The assumption that the water levels have been permanently impacted by CBM did have a significant impact on model calibration. The severely depressed water levels caused by CBM operations have resulted in a large number of cells going dry. The hydraulic parameters of the aquifer units within the eastern portion of the model domain were not adjusted to eliminate the dry cells since it is reasonable to assume that, with the severe drawdown modeled, the coal seams could have been dewatered in these areas. Therefore, even though the effects of the CBM drawdowns were observed during calibration, no specific adjustments were made to the modeled aquifer characteristics to eliminate these impacts. The dry cells did complicate calibration of the model because they cause instability in the MODFLOW model calculations and results.

The model was developed to take into account impacts from the combined effects of CBM and the proposed coal mining. In general, CBM development impacts are significantly larger than the predicted impacts from the Brook Mine. Therefore, ignoring CBM impacts would have significantly under predicted the potentiometric surfaces within the model domain and overestimated the impacts that Brook Mine would have on the system.

Many of the CBM wells are actively being plugged and abandoned. If this trend continues, there is a chance that recovery of water levels from CBM impacts may begin which will result in recharging of the coal seams. If this happens, it is anticipated that the model conservatively over predicts the impacts to the region especially in the long term recovery scenarios.

Comment MuK 70 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 70 – Round 2

Most of the discussion in the original comment has already been incorporated into Addendum MP-3 with the first round of comment responses. However, an additional concluding statement from this response was added to Addendum MP-3 Section 4.11 to incorporate the context of the Round 1 response into the permit application.

Comment MuK 70 – Round 3

Response accepted.

Comment MuK 71 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 71. It is noted that Table 4.7-1 summarizes the calibration residuals and statistics from the calibrated model. Please consider providing additional presentations of the calibrated model statistics. This will enable an easier evaluation of any spatial bias in the model calibration. (MK)

a. X-Y plot of observed vs. simulated water levels.

b. A map plotting the residuals to show the spatial distribution

c. Provide a summary statistics table with Mean Error, Mean Absolute Error, Sum of Squared residuals for the calibrated model. It is noted that some of these values are presented in the sensitivity analysis. However, a compiled summary statistics table would be very helpful.

Response MuK 71 – Round 1

As requested the following additions have been made to the groundwater model report:

A. An X-Y plot of observed versus simulated water levels has been added in the report as Addendum MP-3 Figure 4.7-1.

B. The residuals have been added to figures 4.7-2, 4.7-3, and 4.7-4 of Addendum MP-3.

C. Table 4.7-1 of Addendum MP-3 has been updated to include additional statistics.

Comment MuK 71 – Round 2

No comment received.

Response MuK 71 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 72 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 72. In addition, to the measured water levels, please clarify if there were any flow measurements used for model calibration. (MK)

Response MuK 72 – Round 1

There are no areas within the model domain where it was possible to collect any flow measurements that would support the modeling effort therefore, no flow measurement were used in the calibration.

Comment MuK 72 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 72 – Round 2

Discussion was added Addendum MP-3 Section 2.6 to clarify that no measurements of seepage at the outcrop were available. Also, text has been added to Section 4.7.2 clarifying that there are no measurements available for water that may leave or enter the Tongue River from the coal seams.

Comment MuK 72 – Round 3

Response accepted.

Comment MuK 73 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 73. Please provide a water budget table (in acre-feet per year or cubic-feet per day) showing all the inflows into the model and outflows from the model.

Response MuK 73 – Round 1

The following tables summarizes the inflows and outflows from the model domain during the steady state period, 5 years into mining, the end of mining, and at the end of recovery.

Mass Balance of Steady State Calibrated Model		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
General Heads	16,107	22,890
River	2,569	410
Drains	-	560

Recharge	5,168	-
Total	23,846	23,860

Mass Balance 5 years into Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	12,496	11,431
General Heads	16,130	22,904
River	2,688	385
Drains	-	1,774
Recharge	5,434	-
Total	36,749	36,494

Mass Balance End of Mining		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	3,670	4,146
General Heads	16,135	22,902
River	2,705	365
Drains	-	532
Recharge	5,430	-
Total	27,941	27,945

Mass Balance End of Recovery		
Source/Sink	Inflows (ft^3/d)	Outflows (ft^3/d)
Storage	1,698	2183
General Heads	16,138	22,901
River	2,714	363

Drains	-	535
Recharge	5,427	-
Total	25,978	25,983

Comment MuK 73 – Round 2

Response conditionally accepted. Please incorporate the tables into the permit application. (MK)

Response MuK 73 – Round 2

Addendum MP-3 Section 4.10 has been updated to include the water budget. Specifically, Table 4.10-1 includes the mass balance throughout the mining simulations. A cross reference to the mass balance discussion in Addendum MP-3 Section 4.10 was also added to Addendum MP-3 Section 4.6 for clarity.

Comment MuK 73 – Round 3

Response accepted.

Comment MuK 74 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 74. Please provide a comparison of model simulated inflows and outflows against conceptual estimates of inflows and outflows. This comparison will act as another verification/check for the technical adequacy of the groundwater model (Example model GHB flows vs. reasonable estimated conceptual flows). (MK)

Response MuK 74 – Round 1

Response to comment MuK 73 includes tables that show the inflows and outflows from the model during the steady state period, 5 years into mining, the end of mining, and at the end of recovery. The five main categories of inflows and outflows include 1) storage, 2) general head boundaries, 3) river boundaries, 4) drains, and 5) recharge. Following is discussion regarding model predicted inflows and outflows for each category:

1) Storage – During the steady state model there is no inflow or outflow from storage so storage is not included in the first mass balance table in prepare for comment MuK 73. The model predicts that during active mining more water will come out of storage than will go into storage. Conceptually this is reasonable since during mining, water from the coals would be draining into the mined out areas. There is a trend of water continuing to come out of storage even after mining ceases. Even though the volume of water coming out of storage is quite low, it is contrary to the conceptualization of the system to have

water leaving storage after mining because at this point water should be going back into storage. This phenomenon is attributed to the fact that many of the cells in the model go dry during mining because CBM operations have significantly dewatered the coals and there is not much water available in storage (see comment MuK 70). When the cells go dry, MODFLOW treats them as no flow areas and there can be a ripple effect that causes additional cells going dry. Since MODFLOW is not very efficient at rewetting dry cells when they should be resaturated, this ripple effect has caused permanent changes in the model. Over a long time the model would be expected to come to a steady state condition. The tables prepared in response to comment MuK 73 indicate that even at the end of recovery, the model is not yet at the new equilibrium that would eventually be reached with the additional dry cells.

2) General Head Boundaries – The amount of water going into and out of the model domain via the general head boundaries remains relatively consistent throughout the modeled operations. This is reasonable because the general head boundaries are a long distance from the mining area and would not be expected to be significantly impacted by mining. In addition, the total volume of outflows from the general head boundaries generally balances the inflows from other sources. This is conceptually correct.

3) River Boundaries – The conceptual inflow and outflow from the coals to the Tongue River are discussed in detail in comment MuK 56. Groundwater Vistas does apply the River Boundary cells to the bottom of the layer in which they are inserted. The Tongue River Boundary cells were inserted into the model up to the point where Goose Creek joins the Tongue River. At that location the top of the Carney coal is estimated to be approximately 100 feet below the surface. Since the alluvium is generally much thinner in this area and there is actually a large amount of low permeability strata between the Tongue River alluvium and the coal (described in comment MuK 56), the model likely overestimates the contribution of the River boundary cells to the model because the river boundary cells provide a direct connection (in the model) between the river and the coals where there is not a physical connection. This conservatively over estimates how much water discharges from the River Boundary Cells to the model.

4) Drains – One drain was placed into layer 1 in the northeast side of the model domain to allow water to drain from the model where the Tongue River crosses the domain boundary. This represents the amount of water in layer 1 lost to the surface water system. The total discharge from this drain during steady state conditions is 560 ft^3/day (2.9 gpm). While no physical measurements were (or can be) made to verify this amount, conceptually it is reasonable. The strata along the Tongue River likely does discharge a small amount of water to the River where it cuts through the numerous perched sand lenses that become saturated from natural recharge. There is no evidence of large groundwater

discharges to the Tongue River in this area so it makes sense that a small discharge to the River (rather than a large discharge) would be observed in the model. During mining, drains were added to the model to remove water from the mine pits. The tables indicate that during mining the discharges from the drains do increase as expected. After mining is complete, discharges from the drains return approximately to premining levels which is conceptually correct.

5) The recharge amount used in the model stays at relatively the same level throughout the simulations. Total recharge across the model area is approximately 28 gpm. As is described in comment #65 the recharge rates are reasonable based on available studies.

Comment MuK 74 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. In addition, clarify the reason for increased recharge from the steady state to transient models (5,138 vs 5,434 cu.ft/day).

Response MuK 74 – Round 2

Addendum MP-3 Section 4.10 was updated to include the context of the Round 1 response. The model was also reviewed to determine why there was a slight difference in the recharge rates during the steady state simulation and the transient simulation period (5,168 vs 5434 cu ft/day). During the review of the model it was found that one of the recharge options in the MODFLOW options dialogue box was incorrect. The check box in the dialogue box entitled "Apply recharge from stress period 1 to all stress periods" had not been checked. After checking the option, the model was rerun and during the subsequent run the recharge was the same during the steady state portion and the transient portion of the model. Other minor changes in the mass balance numbers presented in Table 4.10-1 were also noted and the numbers were updated to reflect the model predicted values after changing the recharge settings.

Comment MuK 74 – Round 3

Response not accepted. Please provide the revised model files for the LQD review and records.

Response MuK 74 – Round 3

New Groundwater Vistas files configured to run in Groundwater Vistas Version 6.80 Build 1 are provided on a DVD with this submittal. Please see response to Comment 32 for details.

Comment MuK 75 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 75. Page Addendum MP-3-40 states, "Due to a system of thin aquifers with similar sources and sinks and homogeneous hydraulic conductivities, the head values of the steady-state model were nearly

identical between the separate coal layers as noted in Table 4.7-1." Please clarify whether this statement implies that the interburden (where present) between the coal seams is not a confining unit. (MK)

Response MuK 75 – Round 1

This statement is an observation only based on review of modeled values and does not suggest a lack of confinement exists. Pumping tests conducted in separate aquifers demonstrated that the interburden provides confinement between the Carney and Masters aquifers as described in Section D6-8.3.2.3 of Appendix D6. In addition, Table 4.7-1 of Addendum MP-3 shows that at each cluster where both coal seams contained measureable water, the difference in measured water levels between the coal seams was higher than the modeled difference. This suggests that the vertical hydraulic conductivity assigned to the interburden in the model may be higher than the actual hydraulic conductivity of the interburden in the field. The use of a higher hydraulic conductivity for the interburden in the model will overestimate the drawdown in the other coal seam therefore, the predicted drawdown will be conservative.

Comment MuK 75 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 75 – Round 2

The last sentence in the first paragraph of Addendum MP-3 Section 4.7.2 has been revised for clarification. The Round 1 responses have been incorporated into Addendum MP-3.

Comment MuK 75 – Round 3

Response accepted.

Comment MuK 76 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 76. In figures 4.7-1, 4.7-2 and 4.7-3, please consider including the observed/interpreted water level contours and the measured water level elevations. This will enable to visually evaluate the observed vs. simulated water levels. (MK)

Response MuK 76 – Round 1

Figures 4.7-1, 4.7-2, and 4.7-3 of Addendum MP-3 have been updated to include both observation wells and observed elevations as well as observed potentiometric contours. Please note that in response to Comment MuK 71 an additional figure was added to this section (Figure 4.7-1) and these figures have since been renumbered to 4.7-2, 4.7-3, and 4.7-4.

Comment MuK 76 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 76 – Round 2

The figures previously added to the report (4.7-2, 4.7-3, and 4.7-4) during the first round of comment responses incorporate the context of the Round 1 response into Addendum MP-3.

Comment MuK 76 – Round 3

Response accepted.

Comment MuK 77 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 77. Page Addendum MP-3-45 states, "…….and if CBM production ceases, recovery rates will likely be higher than estimated in the model." Please clarify if this statement implies that currently, there are CBM wells that are operational in the area and are pumping out groundwater. (MK)

Response MuK 77 – Round 1

Although substantially less than past years, some CBM wells in the area are still producing groundwater. Since CBM production has been ongoing for the last 15+ years the CBM operations have significantly lowered the water levels in the coals as is noted in the report. Records of groundwater withdrawals can be found on the Wyoming Oil and Gas Conservation Commission's (WOGCC) online database at: wogcc.state.wy.us. According to WOGCC records there has been no groundwater production associated with CBM in Townships 57 and 58N Range 84W since 2012. However production is still occurring in Townships 57 and 58N Range 83W as well as Township 56N Range 83 and 84W. The portions of the model domain where CBM production may occur are located in Townships 56 and 57N Range 84W.

Comment MuK 77 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 77 – Round 2

Additional text was added to Addendum MP-3 Section 2.3 to describe the timeframe over which CBM wells have been in operation. Also Addendum MP-3 Section 4.8.1 was updated to further capture the context of the Round 1 response.

Comment MuK 77 – Round 3

Response accepted.

Comment MuK 78 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 78. Please consider removing the model sensitivity to storage coefficients and porosity. Steady state groundwater model equations do not include these parameters in any of the model calculations. (MK)

Response MuK 78 – Round 1

As noted in this comment, the final model did not include a transient calibration and a sensitivity analysis on storage coefficient and porosity is not appropriate. The section and discussion regarding model sensitivity to the storage coefficient and porosity has been updated and removed as appropriate.

Comment MuK 78 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 78 – Round 2

Addendum MP-3 Section 4.8.5 (last two sentences) was previously updated during the first round of comment responses to incorporate the context of the Round 1 response.

Comment MuK 78 – Round 3

Response accepted.

Comment MuK 79 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 79. Please clarify if the faults in the model and their parameters were considered in any of the sensitivity analyses. If not, please consider performing a detailed and thorough sensitivity analysis, as the faults appear to influence the drawdowns simulated by the groundwater model. (MK)

Response MuK 79 – Round 1

The faults do influence the drawdowns and flow patterns simulated in the groundwater model. However, as noted in the response to comment MuK 51 the displacement observed in the faults roughly 5 times as thick as the modeled coal seams. Given the fact that the dominant lithology in the area is low permeability claystone/siltstone, it is very likely that where faulting has occurred the displacement has resulted in coals being immediately adjacent to the low permeability strata. Therefore the faults are assumed to be hydrologic barriers to water flow. Based on the best available mapping, these faults have been placed into the model. Because the faults are physical parameters that were developed along with development of the geological model (i.e. elevations and thicknesses of the geological layers), a sensitivity analysis was not performed on the faults.

Part of the reason that the faults influence the groundwater responses in the groundwater model to the degree that they do is because of the CBM impacts. Because the CBM operations have significantly lowered the water levels in the coal seams, the faults create a shadow effect that results in many of the cells immediately downstream of the faults going dry. If there had not been any CBM dewatering operations performed in the coals, the water levels would be significantly higher and the effects of the faults would not be as pronounced.

Comment MuK 79 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 79 – Round 2

The context of the Round 1 response has been added to Addendum MP-3 Section 2.4.1.

Comment MuK 79 – Round 3

Response accepted.

Comment MuK 80 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 80. In addition to the simulated drawdown maps, please consider providing hydrographs at strategically selected locations. This will enable a better presentation of the impacts over time. (MK)

Response MuK 80 – Round 1

As suggested, Appendix A has been added to Addendum MP-3 which depicts the modeled water elevations during the model simulation period at all the water supply wells identified within the model domain (CBM wells excepted) and at selected alluvial target locations within the model domain.

Comment MuK 80 – Round 2

Response not accepted. Appendix A is missing with the electronic files provided to the Cheyenne Office. The hydrographs will be reviewed after the receipt of this Appendix A. (MK)

Response MuK 80 – Round 2

All the appendices for Addendum MP-3 for the first round of comment responses were inadvertently left out of the submittal. Both Appendix A and B are included in this round of comment responses.

Comment MuK 80 – Round 3

Response accepted.

Comment MuK 81 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 81. Please clarify if the three wells listed in Table 4.9-1 are the only wells considered for the analysis. Also, provide a discussion on the methodology to narrow down the analysis from several wells shown in the groundwater rights maps to these three wells. (MK)

Response MuK 81 – Round 1

Additional wells beyond those originally presented in Table 4.9-1 were considered in the analysis. Table 4.9-1 has been updated to include all the wells considered in the analysis. To determine which wells were included in the analysis, completions were compared to modeled surfaces to estimate which formation in which the well was completed. Those thought to be completed in the Carney/Masters sequence were included. Please note that the wells included in Table 4.9-1 error on the side of being over inclusive. Some of the wells are believed to be completed in multiple zones but the analysis assumes that they are only completed in the coal seams of interest. In addition, the well depths were determined based on the State Engineer's database and in many cases well depth data was left blank or was questionable. If there was a question whether a well was actually completed in the coal aquifer of interest the well was assumed to be completed in the coal. Therefore, the well list may include some wells that are not completed in the coals of concern.

Comment MuK 81 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 81 – Round 2

The context of the Round 1 response was added to Addendum MP-3 Section 4.9 during the first round of comment responses. In addition to updating Table 4.9-1, the text was also updated with verbiage from the round 1 comment response to describe how the wells were chosen for inclusion into the model.

Comment MuK 81 – Round 3

Response accepted.

Comment MuK 82 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 82. Please provide (or reference) a discussion about the three wells listed in Table 4.9-1, their depths, screened intervals and other pertinent information. (MK).

Response MuK 82 – Round 1

Table 4.9-1 has been updated to include total depth as well as the screen intervals for all the wells. Additional details on the wells can be found in Adjudication Appendix B.

Comment MuK 82 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 82 – Round 2

Addendum MP-3 Table 4.9-1 was previously updated as noted in the round 1 comment responses. Between the updated text in response to comments and this table, the context of this comment response have been captured in Addendum MP-3.

Comment MuK 82 – Round 3

Response accepted.

Comment MuK 83 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 83. Page Addendum MP-3-60 states, " To measure the impacts to the Tongue River and Goose Creek, a series of targets were placed along these drainages in Layer 1" Please define the term target. Also, clarify if these targets are located in the alluvial aquifer. (MK)

Response MuK 83 – Round 1

The targets as used in Groundwater Vistas are simply locations where heads are measured and compared with measured heads (if there are any available). Ground Water Vistas generates a hydrograph throughout the transient period of mining and recovery for each target. These targets were placed in Layer 1 to estimate the impacts of mining to surface water bodies. These targets are located where the alluvial aquifer is simulated in Layer 1. Targets representing existing well locations were also put in layers 4 and 6 as well as discussed in Comment MuK 81.

Comment MuK 83 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 83 – Round 2

Additional text was added to Addendum MP-3 Section 4.9 to define what a target is. Also, the inclusion of Appendix A has been included with this round of comment responses, which was inadvertently left out of the first round of comments. The appendix should also help incorporate the context of the Round 1 response.

Comment MuK 83 – Round 3

Response accepted.

Comment MuK 84 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 84. Page Addendum MP-3-60 states, "These targets demonstrate that the estimated maximum impact to Tongue River Alluvium is conservatively estimated to reach 2.5 feet drawdown near the river." Please expand the discussion on the impacts to surface water flows including translating the drawdown to an estimated decrease in the groundwater baseflows to Tongue River and Goose Creek. (MK)

Response MuK 84 – Round 1

As shown on the hydrographs included in Appendix A, the maximum water level decline of 2.5 feet to the Tongue River alluvium occurred permanently and was caused by dry cells. This 2.5 foot drawdown is not believed to be a real drawdown because it resulted from model instability rather than a real predicted result. If the model did not have dry cells that caused permanent changes in the model, the maximum drawdown due to mining is estimated to be less than 0.5 feet.

As noted in the response to comment MuK 56, the model estimates the coals will contribute a relatively insignificant amount to water to the base flow of the Tongue River. As noted in Comment MuK 73 in the steady state model the River contributed approximately 2,569 cubic feet per day to the model while the river received 410 cubic feet per from the model. The net result is that in the steady state model 2,159 cubic feet per day (11.2 gpm) was contributed from the river to the model. For comparison, at the end of mining, the River contributed 2,714 cubic feet per day to the model and received 363 cubic feet per day from the model. The net result at the end of mining was that 2,351 cubic feet per day (12.2 gpm) was contributed from the River to the model. Over the simulated mining period the model estimates that the increased contribution of flow from the River to the model will be 1 gpm which represents approximately a 9% increase in flow.

Please note that in Groundwater Vistas the river boundary cells go to the bottom of the layer which likely overestimates the impacts to the River. Within the eastern portion of the model domain the coal aquifers can be 200 or more feet below the level of the river while the Tongue River Alluvium is estimated to be between 15 and 30 feet thick based on the thickness of alluvial wells constructed by Big Horn Coal in the area. Therefore, within the eastern portion of the model domain, the coals may be significantly below the alluvium and no River boundary was included in this portion of the model. However, there is an intermediary region where the actual level of the River is some 30-70 feet higher than the coals. At these locations the River boundary cells were left on to conservatively show the impacts to the river. However, the alluvium in these areas is likely thinner than 40-70 feet. As a result, the model allows the River to

directly contribute water to the coals below and the model is expected to overestimate the impacts to the Tongue River in these locations.

Comment MuK 84 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)

Response MuK 84 – Round 2

Additional text was added to Addendum MP-3 Sections 2.6.3 and 4.9 to incorporate the context of the Round 1 response. Also, text was added to Section 4.10 in response to Comment MuK 73 which helps capture the context of the Round 1 response.

Comment MuK 84 – Round 3

Response accepted.

Comment MuK 85 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 85. Please provide a statement on any hydrologic impacts predicted by the groundwater model to areas outside the Brook mine permit boundary. (MK)

Response MuK 85 – Round 1

The only impacts outside of the Brook Mine Permit Boundary would be observed at the existing water supply wells. Table 4.9-1 describes the estimated impacts at all the water supply wells in the Model domain that will be impacted both inside and outside of the Brook Mine Permit Boundary. Please note that most of these wells are located outside of the Brook Mine permit boundary. As shown on Table 4.9-1 the largest model predicted impact seen at any existing well outside of the Brook Mine Permit boundary is 20 feet which would be observed at P48251W. As shown in the hydrograph for this well in Addendum MP-3 Appendix A, this impact is estimated to be short lived (approximately 4 years). Model predicted drawdowns at the rest of the wells are less than 5 feet. At many of the wells predicted drawdowns are less than 1 foot over the life of the mine.

Comment MuK 85 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)

Response MuK 85 – Round 2

Additional text to capture the context of the Round 1 response has been added to Addendum MP-3 Section 4.11.

Comment MuK 85 – Round 3

Response accepted.

Comment MuK 86 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 86. Please provide a discussion on the simulated impacts caused by mining to surface water – groundwater interaction within the model domain. (MK)

Response MuK 86 – Round 1

Please see the response to comment MuK 84.

Comment MuK 86 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. The comment will be reviewed after the receipt of Appendix A. (MK)

Response MuK 86 – Round 2

Additional text has been added to Addendum MP-3 to incorporate the context of the Round 1 response (also see response to MuK 84).

Comment MuK 86 – Round 3

Response accepted.

Comment MuK 87 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 87. Please compare the model simulated water balance between pre-mining, during mining and post mining conditions. Consider including a table that presents the water balance during select periods showing the flows from all sources and discharges to all the sinks within the model domain. Provide a detailed discussion addressing any changes in the model simulated water balance between pre-mining, during mining and post mining conditions. (MK)

Response MuK 87 – Round 1

Please see responses to comments MuK 73 and MuK 74. A detailed discussion is included in the responses to these comments.

Comment MuK 87 – Round 2

Response accepted. (MK)

Response MuK 87 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 88 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 88. In addition to the maps presented on the recovery estimates, please provide hydrographs at strategically selected locations. This will enable a better presentation of recovery over time. (MK)

Response MuK 88 – Round 1

As described in response to Comment MuK 80, an appendix (Appendix A) has been added to Addendum MP-3 which depicts the modeled water elevations at a number of well and target locations within the model domain.

Comment MuK 88 – Round 2

Response not accepted. Appendix A is missing with the electronic files provided to the Cheyenne Office. The hydrographs will be reviewed after the receipt of this Appendix A. (MK)

Response MuK 88 – Round 2

Appendix A will be included with this second round of comment responses.

Comment MuK 88 – Round 3

Response accepted.

Comment MuK 89 – Round 1

Mine Plan, Addendum MP-3 Groundwater Model, 89. The modeling documentation lacks discussion on the backfill aquifer. In the recovery model, please clarify how the model treats the backfill aquifer (spoils aquifer) and its resaturation. Please provide a discussion (or reference) to the hydraulic properties of the backfill materials used to create the backfill aquifer and the aerial extent of the backfill aquifer. (MK)

Response MuK 89 – Round 1

Mine Plan Section 4.10 discusses the backfill aquifer. Within the areas where the highwall miner is used for mining, an open cavern will be left behind. Unless the mined out areas collapse, the backfill aquifer is essentially an open cavern with 100% porosity. The modeling software used for this effort does not have the ability to transiently change aquifer properties, and during resaturation of the mined areas the assigned storage coefficients remained the same as the original aquifer properties. As a result, the model may underestimate the time that it takes for the aquifer to resaturate where the mining methods have increased the porosity and thereby resaturation volume. Inversely, in the slots mined with traditional open cut mining

techniques, coal will be removed and replaced with overburden material. In these locations the backfilled material is expected to have poor aquifer characteristics because it will primarily be a mix of fine grained clay and silt with some sand. In these areas the aquifer will essentially be removed. Again, the modeling software does not have the ability to transiently change aquifer properties and this effect was ignored during the modeling.

Figure MP-3-4.9-1 shows the areal extent of mining and Addendum MP-3 Figures 4.7-2, 4.7-3, and 4.7-4 depict the areas that were modeled as dry within the Brook Mine permit area. It is important to note that a large percentage of the area that will be mined is dry prior to the initiation of mining. In addition, figures in MP-3 Section 4 show that after mining, some of the areas go dry and do not rewet. In the areas where slots are excavated this prediction is reasonable because the backfill will act as an aquitard with poor aquifer characteristics. A layer by layer review of the mined area at the end of mining was conducted to determine conceptually how ignoring the changes in the coal porosity and changes in backfill material may have impacted the model predictions.

Upper Carney-With exception of a very small portion of mine block 9 (Figure MP-3-4.9-1). The entire Upper Carney coal is unsaturated. Therefore, there is no resaturation and no recovery. The model estimates are appropriate for the Upper Carney coal.

Lower Carney - Most of the mine blocks as well as the open slots are dry in the Lower Carney at the end of mining. Only mine blocks 1, 2, 5, 9, and 10 had substantial portions that were saturated. As a result, the potential error created by transient aquifer properties in model predicted resaturation rates to the underground mined coal blocks in the Lower Carney coal, if any, is expected to be very low. With the exception of the slots cut to mine blocks 5, 9, and 10, all of the slots cut to mine the Carney Coal will also be dry; therefore, resaturation at those locations will not substantially impact model predictions. The slots cut for blocks 9 and 10 generally run parallel to the direction of water flow. If the coal in these locations is completely removed and replaced with an aquitard, the impact to the aquifer will be minimal because water will simply flow around the portion of the backfilled aquifer. The open pit slot cut adjacent to mine block 5 does run perpendicular to the direction that water is flowing and may change the groundwater flow patterns in this area. However, the location of the slot is near the groundwater divide caused by the fault just to the south. Therefore, this slot is not expected to substantially impact groundwater flows either

Masters - Most of the Masters Coal mine blocks are saturated. Only blocks, 4, 5, 6, and 7 have substantial areas that are not saturated. In the mine blocks where underground mining techniques are employed the model may underestimate the time it takes for resaturation to occur because the storage coefficient is not updated to account for the increased porosity of the mined out block. However this resaturation time will be balanced out by the fact that there will be no aquifer replaced in the open cuts to resaturate, and thus these areas would not resaturate as the model predicts.

With the exception of the open cut for mine block 5, all of the open cuts are oriented so that they will have minimal impacts on the natural flow gradients in the wellfield or are located within or adjacent to dry areas. As previously noted, the open cut near mine block 5 is located adjacent the drainage divide so it will not significantly change the water flow within the aquifer.

Due to the fact that much of the mined area is dry, the actual area mined that is below the water table is relatively small, and that the open cuts are oriented such that they have minimal impacts to groundwater flow, the recovery analysis performed by the model is reasonable. Also, as noted, the areas where underground mining is employed and the model overestimates the rate at which the aquifer is resaturated are counterbalanced by the areas of open cuts where the aquifer will not be replaced and the model underestimates the time it takes for the strata to resaturate.

Comment MuK 89 – Round 2

Response conditionally accepted. Please incorporate the context of the response into the permit application. (MK)

Response MuK 89 – Round 2

Text from this comment response was added to Addendum MP-3 Section 4.10 to capture the context of the Round 1 response.

Comment MuK 89 – Round 3

Response accepted.

Comment MuK 90 – Round 1

Mine Plan, Addendum MP-6 Subsidence Control Plan, 90. Figure MP6.1-1 shows "Monarch Seam Surface Only Mining". Please clarify if the Monarch seam is targeted for mining in the appropriate sections of Appendix D5, Appendix D6 and mine plan. (MK)

Response MuK 90 – Round 1

The appropriate sections of Appendix D5 and D6 have been updated.

Comment MuK 90 – Round 2

No comment received.

Response MuK 90 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 98 – Round 3 verbal comment via phone call with WWC 12-2-15

Please provide additional clarification describing why the model predicted discharge from the Tongue River to the underlying layers using the River Cells is conservatively over estimated.

Response MuK 98 – Round 3 verbal comment via phone call with WWC 12-2-15

The text in Addendum MP-3 Section 4.7.2 (Page 50) has been updated to further clarify that the model predicted discharge from the Tongue River to the underlying layers is conservatively high. Please also see Addendum MP-3 Section 2.6.3 (pg 29) for additional discussion on the contribution of water from the Tongue River to the groundwater system.

Reclamation Plan

Comment BJ 57 – Round 1

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-37, The narrative describes the sources of recharge to the coal seams. One lithology mentioned as a positive recharge contributor is the overlying burn, scoria, or clinker material, generated by coal fires. It is a common misunderstanding that the scoriaceous material recharges coal or overburden. It would appear, at first glance, that the broken, vuggy material would be capable of conveying large amounts of water from the surface to materials beneath. That is not the case, however, as the coal/scoria interface has a zone of partially metamorphosed coal ash that lies between the burned material and the remnant coal. I have seen this zone many times during my 25 year career in the coal mines when supervising coal and overburden removal. This zone is characterized by a white to light gray, clay band that ranges in thickness from 6 inches to a foot or more. It is the same high silica ash found in the bottom ash of the local power plants that burn PRB coal. This ash band acts as an aquaclude, preventing water from entering or escaping the coal. Because of this, any recharge models that were run using the scoria as a recharge source must be reevaluated using new layers that do not include the scoria. Rerun recharge models if needed.

Response BJ 57 – Round 1

It is true that the partially metamorphosed coal ash layer between the coal and the scoria has the potential to limit recharge from the scoria to the coal. However, even though the permeability of this layer is low, there will be areas where the coal has collapsed or other geologic variances such as a thinning section which will allow for water from the scoria to come into contact with the coal. Therefore, even though the scoria may not be directly in contact with the coal, there is still a recharge component to the scoria, albeit; significantly lower than if the scoria and coal were in direct contact. This low recharge rate is reflected in the groundwater model. The calibrated recharge rate used in the groundwater model for the areas covered by scoria was 0.35

inches per year. For comparison purposes, the recharge rates assigned to the Carney and Masters outcrops, where no scoria was present, varied from 0.2 to 0.88 inches per year. Considering that in the scoria areas a very large percentage of direct precipitation is expected to infiltrate into the scoria, the 0.35 inch per year recharge rate represents a significant reduction in the amount of water available (which could be upwards of 10 inches per year) to infiltrate into the coal seams. Therefore, the calibrated recharge rate included in the groundwater model does take into account the low permeability layer between the coal and the scoria.

Comment BJ 57 – Round 2

No comment received.

Response BJ 57 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 58 – Round 1

Volume 12, Reclamation Plan, Section RP.8.3, Pg. RP-39, The second sentence in the first paragraph has an odd, difficult to understand syntax. Please rewrite the sentence for clarity.

Response BJ 58 – Round 1

Revised page RP-39 text as requested. The sentence will now read "The mine will consult with WDEQ/LQD to determine the number of spoil wells that will be tested".

Comment BJ 58 – Round 2

No comment received.

Response BJ 58 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 65 – Round 1

EXHIBITS, Reclamation Plan, Exhibit RP.6-1, The permit boundary on this map is inaccurate. Please recreate the permit boundary layer.

Response BJ 65 – Round 1

Revised Exhibit RP. 6-1 as requested.

Comment BJ 65 – Round 2

No comment received.

Response BJ 65 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment BJ 66 – Round 1

EXHIBITS, Reclamation Plan, Exhibit RP.8-3 and Exhibit RP.8-4, The post mining potentiometric surfaces for the Carney and Masters beds are suspended in mid-air over Slater Creek. Please terminate the contour lines at the outcrop or use a dotted line to indicate the calculated potentiometric surface.

Response BJ 66 – Round 1

Revised Exhibit RP.8-3 and RP.8-4 as requested.

Comment BJ 66 – Round 2

No comment received.

Response BJ 66 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 24 – Round 1

Reclamation Plan, Section RP.4. This brief section discusses what is considered spoil material to be removed during mining. The section states that spoil does not include coal, but there are some very narrow coal seams with numerous stringers of clay or of such low quality that will probably not be mined and will be placed in backfill. Also, the top layers of most coal seams are quite "dirty" and would also be removed and backfilled. In order to provide the readers with a more accurate description of the mining and reclamation processes, please revise the text to show that some coal-laden materials will also be considered spoils and will be backfilled during reclamation.

Response DS 24 – Round 1

Revised text as requested.

Comment DS 24 – Round 2

No comment received.

Response DS 24 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 25 – Round 1

Reclamation Plan, Section RP.5.2. Please provide a description of the methods used to control topsoil depth during replacement. Most mining operations use stakes with surveyed marks as guides for controlling soil application depths.

Response DS 25 – Round 1

See Section RP.5.4 for a description of the methods used to control topsoil depth during replacement.

Comment DS 25 – Round 2

No comment received.

Response DS 25 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 26 – Round 1

Reclamation Plan, Section RP.5.4. Variability in topsoil depth cannot be avoided due to limitations imposed by the equipment used and the pre-application preparations which may include ripping of the compacted overburden surface. Typically, the depth of topsoil application may vary 25%, but the average depth should be closely monitored and should not exceed the average availability. Also, because some soils exhibit unsuitable characteristics and will not be used for reclamation, discussion of the use of substitute topsoil materials is warranted in this section.

Response DS 26 – Round 1

Revised text as requested. Added discussion about substitute topsoil being an option if not enough suitable topsoil is salvaged.

Comment DS 26 – Round 2

No comment received.

Response DS 26 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 27 – Round 1

Reclamation Plan, Section RP.5.6. Sediment control measures will be required to prevent untreated runoff from exiting reclaimed lands onto adjacent native lands. Please provide a discussion of the sediment control measures to be used.

Response DS 27 – Round 1

Revised text as requested.

Comment DS 27 – Round 2

Response is not adequate. Use of ASCMs during mining and following reclamation as sediment control must follow the requirements of Guideline 15. Brook Mine must provide some detail about how the ASCMs will be sized, certified, permitted and terminated. ASCMs may not be used within ½ mile of the Tongue River. Please provide requested information in the Mine Plan.

Response DS 27 – Round 2

In response to Comment MK 116 (Round 2), ASCMs have been removed as the primary form of sediment control within half of a mile of the Tongue River and Goose Creek. In the place of ASCMs within the half-mile buffer, sediment impoundments have been designed. These designs are now provided in Addendum MP-2. Design standards for ASCMs, inspection and maintenance standards for ASCMs, and ASCM removal and site reclamation standards are provided in Addendum MP-1.

Comment DS 27 – Round 3

Response is not adequate. The text in Section 5.6 is not adequate. ASCMs or sediment reservoirs/sumps must be used to control sedimentation from disturbed/reclaimed lands onto adjacent native lands until Phase 2 Bond Release Verification has been approved. The text must be changed to clearly show the types of sediment control that will be used until Phase 2 Bond Release Verification has been approved.

Response DS 27 – Round 3

The text has been revised in Section RP.5.6 to state that sediment measures will be in place until sediment control release has been obtained.

Comment DS 28 – Round 1

Reclamation Plan, Section RP.8.2. This section states only that impoundments will require Landowner, LQD and SEO approval. Prior to construction of post mining impoundments, SEO approved plans for the impoundments must be submitted for inclusion in the permit Reclamation Plan. Please include a statement that a Reclamation Plan revision will be approved by the LQD prior to construction of impoundments.

Response DS 28 – Round 1

Revised Section RP.8.2 to include a statement regarding LQD approval before the construction of postmine impoundments.

Comment DS 28 – Round 2

No comment received.

Response DS 28 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 29 – Round 1

Reclamation Plan, Section RP.11.1. The primary final land use for the permitted acreage will be grazing and wildlife. Only areas where the current use is industrial will remain industrial land uses after mining is completed. Therefore, in order for any constructed buildings or railroad access to remain following mining, and a permit revision to change the land use will be required. It is not just a matter of demonstrating usefulness to the LQD and receiving landowner consent. This will be a major revision to the permit that will require public notice. Clarification should be provided concerning the steps involved to allow building to remain.

Response DS 29 – Round 1

Revised text as requested. Eliminated discussion in Section RP.11 regarding leaving any buildings, facilities, and equipment following completion of mining.

Comment DS 29 – Round 2

No comment received.

Response DS 29 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 30 – Round 1

Reclamation Plan, All Mine Plan Maps with progressions must show the actual years of the initial disturbance or mining activity, or the progression must be linked to a specific year in Reclamation Plan text. The maps must also include the contour interval.

Response DS 30 – Round 1

See Mine Plan MP.1.6 for a description of permit terms and initial year. Revised text in Reclamation Plan Section RP.13 to reference Mine Plane MP.1.6. Revised Exhibit RP.5-1 adding "Note: Year 3 corresponds to the year 2019" in Legend.

Comment DS 30 – Round 2

No comment received.

Response DS 30 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DS 33 – Round 2 (New Comment)

New Comment: Reevaluate the average topsoil replacement depth based on salvage depth estimates shown in Appendix D7 and expected disturbance of each soil series during mining. 18 inches may not be adequate.

Response DS 33 – Round 2 (New Comment)

The topsoil depth has been revised in the first paragraph of Section RP.5.4.

Comment DS 33 – Round 3

No comment received.

Response DS 33 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment DE 19 – Round 1

Reclamation Plan, Section RP.5.1, page RP-6 – RAMACO states that the contoured surface will be scarified or ripped, if necessary. The mine should commit to scarifying or ripping all surfaces prior to topsoil replacement.

Response DE 19 – Round 1

Revised text as requested. Remove "if necessary" from sentence.

Comment DE 19 – Round 2

No comment received.

Response DE 19 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 20 – Round 1

Reclamation Plan, Section RP.5.6, page RP-8 - The 1st sentence of the 2nd paragraph doesn't make sense. Please correct.

Response DE 20 – Round 1

Revised text as requested. The sentence now reads "Rills and gullies occurring in redistributed soil precluding the achievement of the approved postmining land use or the reestablishment of vegetative cover will be rectified".

Comment DE 20 – Round 2

No comment received.

Response DE 20 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment DE 21 – Round 2 (New Comment)

There still has been no Reclamation Bond Estimate submitted at this time so there is nothing to review.

Response DE 20 – Round 2 (New Comment)

Reclamation Bond calculations are pending.

Comment DE 21 – Round 3

The applicant still has not submitted any reclamation bond but Western Water has scheduled a meeting to discuss the bond for November 5, 2015. I cannot recommend approval of this permit application until an adequate reclamation bond has been submitted.

Response DE 20 – Round 3

A reclamation bond estimate has been provided as part of the Round 3 response package.

Comment JJ 5 – Round 1

Reclamation Plan, 5. Exhibit RP 6-1 also displays permit boundary discrepancies in regards to the section lines on it and those located on the Adjudication Exhibit 1. Please update accordingly.

Response JJ 5 – Round 1

See response to comment BJ 65. Revised Exhibit RP.6-1 as requested.

Comment JJ 5 – Round 2

No comment received.

Response JJ 5 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment JJ 6 – Round 1

Reclamation Plan, 6. Table RP 6-1 states that there are 11.6 acres of wetlands and other aquatic resources. Please discuss where these acres are to be reclaimed and show them on the Exhibit RP. 6-1 which displays the reclaimed vegetation communities and their locations.

Response JJ 6 – Round 1

Revised Section RP.9 to include reference to Exhibit RP.6-1 for location of reclaimed wetlands and OAR. Revised Exhibit RP.6-1 to include reclaimed wetlands and OAR locations.

Comment JJ 6 – Round 2

No comment received.

Response JJ 6 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 24 – Round 1

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, Assuming the Tongue River is an AVF, this section should discuss how the essential hydrologic functions will be maintained and/or reestablished, as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(ii). As noted in Comment No. 21, the essential hydrologic functions of the Tongue River AVF need to be identified and a monitoring system needs to be installed. (MDK)

Response MK 24 – Round 1

Revised text as requested in Section RP.10.

Comment MK 24 – Round 2

Response not accepted. Please provide a more thorough discussion for each identified essential hydrologic function to demonstrate that the functions will be maintained throughout the mining operation. In particular, since mining is predicted to cause some amount drawdown in the Tongue River alluvium (Mine Plan Addendum MP-3), this needs specific discussion to demonstrate that the essential hydrologic functions will be maintained and/or reestablished.

Please also provide more detail on the plan and frequency of analyzing the aerial imagery. In addition, please note that given that Mine Plan Addendum MP-3 predicts some amount of drawdown in the alluvium of the Tongue River, installation of alluvial monitoring wells would be required to monitor the AVF. Otherwise there will be no way to assess the validity of the predicted drawdowns. Please provide a more detailed plan for installing the alluvial monitoring well(s). (MDK)

Response MK 24 – Round 2

The text at the end of Section RP.10 has been revised to include the pertinent details on the essential hydrologic function monitoring plan. The plan includes obtaining infrared photography every 5 years and photo documentation annually, as well as installing and monitoring alluvial wells on the Tongue River and Goose Creek during mining and reclamation periods. Exhibit RP.8-5 has been revised to include the proposed locations of the alluvial wells. Also, Guideline 9 Alluvial Valley Floors has been added to the Reference Section RP.17.

Comment MK 24 – Round 3

Response not accepted. Please see review of the response to Comment MK 21 and state in the text in Section RP.10 that the three proposed wells will be installed prior to commencing any mining-related disturbance. (MDK)

Response MK 24 – Round 3

A sentence stating alluvial monitoring wells will be installed prior to commencing mining related disturbance was added to Section RP.10.

Comment MK 25 – Round 1

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 25. As noted in Comment No. 21, the adjacent Goose Creek AVF also needs a monitoring system to demonstrate essential hydrologic functions are maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 25 – Round 1

Revised text as requested in Section RP.10.

Comment MK 25 – Round 2

Response not accepted. Please revise the discussion on the Goose Creek AVF monitoring system as per the response to Comment MK 24. (MDK)

Response MK 25 – Round 2

See response MK 24 for discussion on the Goose Creek AVF monitoring system.

Comment MK 25 – Round 3

Response accepted.

Comment MK 26 – Round 1

Reclamation Plan, Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors, 26. This section may also need to be addressed if the LQD finds that other AVFs exist on or near the permit area. If AVFs are determined to be present, the essential hydrologic functions must be maintained and/or reestablished as required by LQD Coal Rules and Regulations, Chapter 5, Section 3(c)(i) and (ii). (MDK)

Response MK 26 – Round 1

Revised text as requested in Section RP.10.

Comment MK 26 – Round 2

No comment received.

Response MK 26 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 75 – Round 1

Reclamation Plan, Section RP.3.3 Postmine Slope Analysis, 49. Please provide a discussion that compares the pre-mine vs. post-mine slope characteristics. A table would be helpful that compared the minimum, maximum, and average slopes under pre-mine and post-mine conditions. (MDK)

Response MK 75 – Round 1

Added Table RP.3-1 comparing premining and postmining slopes. Updated Section RP.3.3 of text to include reference to the new table.

Comment MK 75 – Round 2

No comment received.

Response MK 75 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 76 – Round 1

Reclamation Plan, Section RP.3.5 Drainage Reestablishment, 50. It is stated that mining will disturb portions of the Slater Creek channel and the reclamation will entail reconstruction. However, the Mine Plan PHC (Section MP.6.1) stated that Slater Creek

"will still flow naturally around the trench", and "Because Slater Creek's flow will not come into contact with mining activities, no impact will be made to water quality". Please provide a clear and explicit description of the extent of direct disturbance to the Slater Creek channel. This description should be consistent between the Mine Plan and Reclamation Plan. (MDK)

Response MK 76 – Round 1

As stated in the revised Section MP.6.1 of the Mine Plan, the only anticipated surface disturbance to Slater Creek during mining will be the redirection of the channel through a culvert under a proposed haul road. No text was edited in response to this comment.

Comment MK 76 – Round 2

No comment received.

Response MK 76 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 77 – Round 1

Reclamation Plan, Section RP.4.2 Mitigation of Unsuitable Material , 51. Minor channels are defined as ephemeral streams but there is no definition provided for "major channels". Please provide a definition and also illustrate an example of a major channel within the proposed permit boundary that would fit into this category. (MDK)

Response MK 77 – Round 1

Revised text in Section RP.4.2 to provide the definition of major channels.

Comment MK 77 – Round 2

No comment received.

Response MK 77 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 78 – Round 1

Reclamation Plan, Section RP.5.6 Erosion Control and Conservation Practices, 52. The first sentence of the second paragraph…"Rills and gullies…" needs revised, as it appears to be missing one or more words. (MDK)

Response MK 78 – Round 1

See response to Comment DE 20. Text revised as requested.

Comment MK 78 – Round 2

No comment received.

Response MK 78 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 79 – Round 1

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 53. The second sentence discusses stockponds possibly being disturbed by mining activities. The Mine Plan PHC did not mention that any existing stockponds would be disturbed by mining activities. If stockponds are to be disturbed by the mining operation, this should be discussed in the Mine Plan PHC. (MDK)

Response MK 79 – Round 1

The text in the Mine Plan PHC has been revised to clarify the disturbance to stockponds within the permit area. Section RP.7.4 has been revised to clarify the anticipated aquatic habitat locations.

Comment MK 79 – Round 2

No comment received.

Response MK 79 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 80 – Round 1

Reclamation Plan, Section RP.7.4 Aquatic Habitat, 54. The text states that two additional postmine impoundments will be constructed and their location is shown in Exhibit RP.3-1. This Exhibit shows ten permanent impoundments, both on and adjacent to the proposed permit area. Please revise this discrepancy in the text or change the symbology in the Exhibit to clearly show the two permanent post-mine impoundments. (MDK)

Response MK 80 – Round 1

Revised text in Section RP.7.4. to clarify the postmine impoundment locations.

Comment MK 80 – Round 2

No comment received.

Response MK 80 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 81 – Round 1

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 55. Please add the major stream name labels (Tongue River, Goose Creek, East Fork Earley Creek, Slater Creek, Hidden Water Creek) to Exhibit RP.8-1. (MDK)

Response MK 81 – Round 1

Revised Exhibit RP.8-1 as requested.

Comment MK 81 – Round 2

No comment received.

Comment MK 81 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 82 – Round 1

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 56. Please explain in the text how the postmine drainage basin parameters in Table RP.8-1 were determined. (MDK)

Response MK 82 – Round 1

Revised text in Section RP.8.1 as requested.

Comment MK 82 – Round 2

No comment received.

Response MK 82 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 83 – Round 1

Reclamation Plan, Section RP.8.1 Drainage Basin Reconstruction, 57. The text states that a comparison of drainage basin parameters in Table RP.8-1 and Exhibit RP.8-1 show that the overall hydrologic balance will remain largely unchanged. This conclusion is not obvious from the Table and Exhibit. How similar are the postmine drainage basin parameters to the pre-mine parameters? Which sub-drainages show the largest change from pre-mine conditions? The text needs to include a more thorough discussion to demonstrate to the reader why exactly the postmine hydrologic balance will be unchanged. (MDK)

Response MK 83 – Round 1

Revised text to include reference to Appendix D6 tables and exhibits regarding drainage basin parameters. Minor disturbance and mining methods contribute to the largely unchanged postmine drainage basin parameters.

Comment MK 83 – Round 2

No comment received.

Response MK 83 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 84 – Round 1

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 58. The text provides no discussion of the comparison between the pre-mine and postmine modelled discharge values. Please provide this discussion so the reader can determine if the differences are minor or major. (MDK)

Response MK 84 – Round 1

Revised text in Section RP.8.1.1 as requested.

Comment MK 84 – Round 2

No comment received.

Response MK 84 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 85 – Round 1

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 59. Please add the year to the Miller reference within the text (2003) and add this citation to the references list in Section RP.17. (MDK)

Response MK 85 – Round 1

Revised text as requested.

Comment MK 85 – Round 2

No comment received.

Response MK 85 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 86 – Round 1

Reclamation Plan, Section RP.8.1.1 Discharge Estimates, 60. Similar to Comment No. 8 made for Appendix D6, the HEC-HMS runoff estimates in Table RP.8.4 are much higher than the Miller (2003) equations. Please provide a discussion in the text as to the reasonableness of the HEC-HMS estimates and why the HEC-HMS estimates are so much higher than the Miller (2003) regression equations.

Response MK 86 – Round 1

See response to Comment MK 34. No revisions to the text were made.

Comment MK 86 – Round 2

No comment received.

Response MK 86 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 87 – Round 1

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, The last sentence in the first paragraph states that stream reaches for which designed cross sections are provided are identified in plan on Exhibit RP.8-1. There is nothing on this Exhibit that shows which stream reaches have designed cross sections, nor which stream channels are being reconstructed. Please clearly identify this information on this Exhibit. (MDK)

Response MK 87 – Round 1

Exhibit RP.8-1 has been revised as requested.

Comment MK 87 – Round 2

No comment received.

Response MK 87 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 88 – Round 1

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 62. Exhibit RP.8-2 shows that the main Slater Creek channel will not be disturbed. Please consider this in light of Comment No. 50 that requested clarification on the extent of disturbance to the Slater Creek channel. (MDK)

Response MK 88 – Round 1

See response to Comment MK 76(referred to as Comment No. 50). Revised Exhibits RP.8-1 RP.8-2 as requested. A reconstructed Slater Creek (Figure RP.8-9) cross section has been added to reflect the correct disturbance boundary.

Comment MK 88 – Round 2

No comment received.

Response MK 88 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 89 – Round 1

Reclamation Plan, Section RP.8.1.2 Channel/Floodplain Design, 63. On Page RP-35, second paragraph, it references "reclaimed Slater Creek channel" and channel hydraulics are presented in Table RP.8-5. It is not clear why channel hydraulics are presented for Slater Creek when it will not be disturbed. Is this because reclaimed tributaries to Slater Creek are changing such that the main channel of Slater Creek is expected to be change? Please clarify this in the text. (MDK)

Response MK 89 – Round 1

Slater Creek is included Table RP.8-5 to show that the postmine Slater Creek Channel will be hydraulically similar to premine conditions after mining and reclamation operations have been completed as reclamation of a portion of Slater Creek is expected.

Comment MK 89 – Round 2

No comment received.

Response MK 89 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 90 – Round 1

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 64. It is unclear exactly how many new postmine impoundments will be constructed. Table RP.8-6 identifies two impoundments (Enhancement Stock Pond 1 and Replacement Stock Pond 1), and these are shown in Exhibit RP.3-1. Exhibit RP.3-1 shows eight other permanent impoundments. Please identify if these are new features to be constructed or if they are existing stockponds that may be affected by the mining operation. (MDK)

Response MK 90 – Round 1

The text in Section RP.8.2 has been revised to clarify that only the new features to be constructed are displayed in Table RP.8-6. Affected existing stockponds will be constructed approximately to premine conditions.

Comment MK 90 – Round 2

No comment received.

Response MK 90 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 91 – Round 1

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 65. Please identify in this section if there will be a net increase or decrease in post-mine water storage capacity relative to pre-mine capacity. (MDK)

Response MK 91 – Round 1

Revised text in Section RP.8.2 to clarify a net increase in water storage capacity is expected due to the addition of two postmine impoundments.

Comment MK 91 – Round 2

No comment received.

Response MK 91 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 92 – Round 1

Reclamation Plan, Section RP.8.2 Permanent Impoundments, 66. As mentioned Comment No. 47, it is advised that the applicant discuss with the SEO-Interstate Streams Division any implications for the Yellowstone Compact if new water storage features are proposed that potentially decrease water quantity to the Tongue River. (MDK)

Response MK 92 – Round 1

See response to Comment DS 28(Comment No. 47 mentioned above). Revised text as requested.

Comment MK 92 – Round 2

Response not accepted. The response referenced Comment DS 28, which did not mention consulting with the SEO about the Yellowstone Compact. As indicated in the

response to Comment MK 73, RAMACO is aware of the Yellowstone Compact and will act in accordance with the guidelines outlined. Please add a similar statement to Section RP.8.2. (MDK)

Response MK 92 – Round 2

The text in Section RP.8.2 Permanent Impoundments has been revised in the second paragraph to acknowledge that RAMACO will obtain a permit from the SEO, therefore any implications to the Yellowstone Compact will be analyzed by the SEO.

Comment MK 92 – Round 3

Response accepted.

Comment MK 93 – Round 1

Reclamation Plan, Section RP.8.4.2 Surface Water Monitoring, 67. The text on Page RP-40 states that the surface water monitoring stations are shown on Exhibit RP.8-4. However, the stations are not shown on this Exhibit. It may be make the most sense to add these to Exhibit RP.8-5 and rename the Exhibit "Postmine Hydrologic Monitoring Locations" so the surface water stations and monitoring wells are on one Exhibit. (MDK)

Response MK 93 – Round 1

Revised the reference in text to state "locations of these sites are shown on Exhibit RP.8-5". Exhibit RP.8-5 was revised to include surface water monitoring stations and renamed as requested. Table RP.8-9 was edited to include all planned surface water stations including postmine impoundment monitoring sites.

Comment MK 93 – Round 2

No comment received.

Response MK 93 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 94 – Round 1

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 68. The text on Page RP-41 states that water quality samples will be collected at each of the postmine impoundments listed in Table RP.8-6 and presented on Exhibit RP.3-1. Please clarify in the text that this sampling list includes all ten impoundments shown. (MDK)

Response MK 94 – Round 1

Revised text in Section RP.8.4.3 to reference Table RP.8-9 and Exhibit RP.8-5 for postmine surface water monitoring sites including postmine impoundments.

Comment MK 94 – Round 2

No comment received.

Response MK 94 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 95 – Round 1

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 69. Please add the list of impoundments to be sampled to Table RP.8-9 "Surface Water Monitoring Sites". (MDK)

Response MK 95 – Round 1

Revised Table RP.8-9 as requested.

Comment MK 95 – Round 2

No comment received.

Response MK 95 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 96 – Round 1

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 70. The postmine impoundments to be sampled appears to be slightly different from the impoundments listed in Mine Plan Table MP.7-1 "Operational Surface Water Monitoring Locations". Table MP.7-1 lists three impoundments (Hall Reservoir, Black Mountain No. 1 Stock Reservoir, and Legerski Bros #1 Stock Reservoir) that are not listed as postmine impoundments to be sampled. Please explain why there is a difference in the operational monitoring and postmine monitoring of some impoundments. (MDK)

Response MK 96 – Round 1

Black Mountain No.1 Stock Reservoir has been added as a postmine impoundment that will be monitored. Legerski No. 1 Stock Reservoir and Hall Reservoir are outside of the areas planned for mining disturbance, however in an effort to further monitor the surface water of the Brook Mine permit area, the reservoirs were added to be sampled quarterly during mining. Table RP.8-9 and Exhibit RP.8-5 have been updated to include Black Mountain Reservoir No. 1 Stock Reservoir.

Comment MK 96 – Round 2

No comment received.

Response MK 96 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 97 – Round 1

Reclamation Plan, Section RP.8.4.3 Postmine Impoundments, 71. In the second full paragraph on Page RP-41, "The water quality samples.." please also state that the water quality samples will be compared against WDEQ/WQD Class III groundwater standards, as suggested by LQD Guideline No. 17 for replacement and enhancement stockponds. (MDK)

Response MK 97 – Round 1

Revised text as requested in Section RP.8.4.3.

Comment MK 97 – Round 2

No comment received.

Response MK 97 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 98 – Round 1

Reclamation Plan, Section RP.8.5.2 Surface Water, 72. At the end of the first paragraph on Page RP-44, it predicts a "slight change" in event peaks and volumes. Please further discuss what is meant by a "slight change", i.e., what is the magnitude of the increase or decrease? (MDK)

Response MK 98 – Round 1

Section RP.8.5.2 has been updated to reflect the change in event peaks and volumes will be less than one percent when compared to premining conditions.

Comment MK 98 – Round 2

No comment received.

Response MK 98 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 99 – Round 1

Reclamation Plan, Section RP.8.5.2 Surface Water, 73. In the second paragraph on Page RP-44, please clarify the extent of direct mining disturbance to Slater Creek versus tributaries of Slater Creek. This comment relates to previous Comments No. 50 and 62. (MDK)

Response MK 99 – Round 1

See response to Comments MK 76 (comment No. 50) and Mk 88 (Comment No. 62).

Comment MK 99 – Round 2

No comment received.

Response MK 99 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 100 – Round 1

Reclamation Plan, Section RP.8.5.2 Surface Water, 74. Please provide a discussion as to whether the planned postmine impoundments will affect surface water quantity on or downstream of the proposed permit area. (MDK)

Response MK 100 – Round 1

Section RP.8.5.2 has been revised to include discussion of the effect of postmine impoundments to the surface water quantity on and downstream of the proposed permit area.

Comment MK 100 – Round 2

No comment received.

Response MK 100 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 101 – Round 1

Reclamation Plan, Section RP.9.1 Introduction, 75. The second paragraph references Appendix D8. Should this be Appendix D10 (Wetlands)? Please revise this if necessary. (MDK)

Response MK 101 – Round 1

The reference has been revised to D10 as requested.

Comment MK 101 – Round 2

No comment received.

Response MK 101 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 102 – Round 1

Reclamation Plan, Section RP.9.1 Introduction, 76. Please add a statement up front in the Wetland Mitigation section that the USACE has not yet issued a jurisdictional determination for the proposed Brook Mine. Please also provide a statement in the text that the information in Section RP.9 may be subject to change pending the USACE determination. The USACE jurisdictional determination should also be incorporated somewhere into the Mine Permit once that is received by the Brook Mine. (MDK)

Response MK 102 – Round 1

Sections RP.9.1 has been revised as requested.

Comment MK 102 – Round 2

No comment received.

Response MK 102 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MK 103 – Round 1

Reclamation Plan, Section RP.14 Bond Release, 77. The LQD no longer requires a bond release verification for "sediment control release". This is now termed "surficial stability verification". More information is available in LQD Guideline No. 23. Please revise the text for this change. (MDK)

Response MK 103 – Round 1

The text in Section RP.14 has been revised by removing the reference to sediment control release.

Comment MK 103 – Round 2

Response accepted. However please note that RAMACO may wish to also cite LQD Guidelines No. 20, 21, 22, 23, and 25, as these are key documents for assisting operators with bond release procedures. (MDK)

Response MK 103 – Round 2

The text in Section RP.14 Bond Release has been revised to include discussion of WDEQ/LQD Guidelines No. 20, 21, 22, 23 and 25 for bond release. In addition, the Guidelines mentioned above have been added to Section RP.17 References.

Comment MK 103 – Round 3

No comment received.

Response MK 103 – Round 3

Round 2 response assumed to be adequate. No response is necessary.

Comment MK 118 – Round 2 (New Comment)

In Section RP.3.4 Erosion and Sedimentation Control Practices, the first sentence on Page RP-4 references sedimentation impoundments. As noted in the response to Comment MK 49, sedimentation impoundments are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation impoundments are not planned. (MDK)

Response MK 118 – Round 2 (New Comment)

The Mine Plan has been revised to state that sedimentation impoundments will be required. Designs for sedimentation impoundments required in the first five years of operations are now provided in Addendum MP-2. Therefore, the reference to sedimentation impoundments in the Reclamation Plan has been left in place.

Comment MK 118 – Round 3

Response accepted.

Comment MK 119 – Round 2 (New Comment)

In Section RP.8.5.2 Surface Water, the third sentence of the last paragraph on Page RP-46 references sedimentation reservoirs. As noted in the response to Comment MK 49, sedimentation reservoirs are not currently planned as part of the mining operation. The text in this section should also clarify that sedimentation reservoirs are not planned. (MDK)

Response MK 119 – Round 2 (New Comment)

The Mine Plan has been revised to state that sedimentation impoundments will be required. Designs for sedimentation impoundments required in the first five years of operations are now provided in Addendum MP-2. Therefore, the reference to sedimentation impoundments in the Reclamation Plan has been left in place.

Comment MK 119 – Round 3

Response accepted.

Comment MK 127– Round 3 (New Comment)

RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors. Although no mining is planned on the AVFs on the Tongue River and Goose Creek, the disturbance boundary is within a small part of the Big Horn Mine AVF extent (Exhibit D11.6-1). It appears that this area includes the SP-1, OB-1, and OB-2 features in Section 21 on Exhibit MP.5-1, which was updated for this

round. Please include a statement in the text of Section RP.10 that there is some minor disturbance proposed within the AVF extent. Please also discuss in the text of Section RP.10 whether this disturbance would affect the essential hydrological functions of the AVF. (MDK)

Response MK 127 – Round 3 (New Comment)

Minor disturbance is planned within the Big Horn Mine AVF extent in Section 21of Township 57 North, Range 84 West. The disturbance should not affect the essential hydrologic functions of the AVF on the Tongue River as the disturbed area is minimal in size and should not preclude the conveyance of flow. AVF areas disturbed will be replaced to mimic premine conditions. Discussion of the reclamation of the disturbed AVF areas has been added to the second paragraph of Section RP.10.

Comment MuK 91 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 91. Section 8.3, page RP-38 states, "The estimated Postmine Potentiometric surfaces for the reclaimed aquifer for the Masters and Carney Seams are presented respectively in Exhibit RP.8.3 and Exhibit RP.8-4. Please provide a summary comparing and contrasting the premine potentiometric surfaces vs. post mine potentiometric surfaces. This comparison should also consider any changes in the hydraulic properties (hydraulic conductivity, storativity, recharge capacity) of the premine aquifers vs. post mine aquifers. (MK)

Response MuK 91 – Round 1

Section RP.8.5.3 has been revised to include discussion regarding the comparison of premine and postmine potentiometric surfaces.

Comment MuK 91 – Round 2

No comment received.

Response MuK 91 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 92 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 92. Please discuss any changes in the interaction between the surface water and groundwater systems from the premining through the postmining phases of the operation. (MK)

Response MuK 92 – Round 1

The response to Comment MuK 84 describes interaction between the surface water and groundwater systems from the premining through the postmining phases of operation. In general the changes between the surface water systems and the groundwater systems are expected to be minimal. For a short time during mining it is

anticipated that there will be a small (less than 6%) increase in the amount of water that recharges the coal seams from the Tongue River. Once the water levels in the coals recover, no further impacts are expected.

Comment MuK 92 – Round 2

No comment received.

Response MuK 92 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 93 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 93. Please discuss the intersection of the postmining topographic and potentiometric surfaces and their effects on the location and size of groundwater-fed water bodies. (MK)

Response MuK 93 – Round 1

Revised Section RP.8.5.3 as requested.

Comment MuK 93 – Round 2

No comment received.

Response MuK 93 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 94 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 94. Section 8.5.3, page RP-46 states, "These water quality changes can be qualitatively predicted from the overburden mineralogy and projected post mine hydrology." Please expand this discussion on projected groundwater quality. Provide a discussion on the estimated/ projected post mining groundwater quality. A detailed description of potential changes in water quality from flow through backfill/mined out areas should be included. Any potential changes to water quality in adjacent aquifers should be discussed with respect to the potential for offsite material damage. (MK)

Response MuK 94 – Round 1

Revised Section RP.8.5.3 text as requested.

Comment MuK 94 – Round 2

No comment received.

Response MuK 94 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 95 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 95. Please provide a discussion on any anticipated water use during the reclamation period. (MK)

Response MuK 95 – Round 1

As discussed in Addendum MP-3, the only anticipated groundwater uses during the reclamation period are at existing water supply wells. Section RP.8.5.3 has been revised to include additional discussion.

Comment MuK 95 – Round 2

No comment received.

Response MuK 95 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment MuK 96 – Round 1

Reclamation Plan, RP 8.5.3 Groundwater, 96. Please address (or reference) any expected post-reclamation subsidence effects on the hydrologic system (both quantity and quality) and the plan to minimize these effects. (MK)

Response MuK 96 – Round 1

Section RP.8.5.3 has been revised to include discussion of expected postmine subsidence effects on the hydrologic system.

Comment MuK 96 – Round 2

No comment received.

Response MuK 96 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 7 – Round 1

Reclamation Plan, Page RP-13. Section RP.6.2.6. In the last sentence please add that substitutions to the seed mix will be made only with WDEQ approval.

Response SP 7 – Round 1

Revised text in Section RP.6.2.6 as requested, the statement will now read "In the event that seed for primary species is not available, alternatives will be considered

which match the life form and morphology of the primary choice only with WDEQ approval."

Comment SP 7 – Round 2

No comment received.

Response SP 7 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 7 – Round 3

The response is satisfactory. A commitment to notify the DWEQ for seed mix substitutions has been added.

Comment SP 8 – Round 1

Reclamation Plan, Page RP-16. Section RP.6.4.1. To demonstrate that all of the unaffected acres of each vegetation community are sufficient for an extended reference area please create a table with total acres and affected acres and reference this table in this section.

Response SP 8 – Round 1

Table RP.6-6 has been created to display the number of extended reference acres for the respective vegetation communities. The text in Section RP.6.4.1 has been revised to include a reference to the newly created table.

Comment SP 8 – Round 2

No comment received.

Response SP 8 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 8 – Round 3

Table RP6-6. This table should use the acreage within the permit boundary since the mine has control over management of the land in the permit. Please revise the first column of this table from Brook Mine Study Area to Brook Mine Permit Area and use the acreages from Table D8.2-1. For the second column please title it Disturbed Acreage. When the subtraction for the final column occurs there will be very little acreage for the Agricultural Land but historic or county production numbers can be used.

Response SP 8 – Round 3

Table RP.6-6 has been revised with the permit area acreages from Table D8.2-1 in the first column and the second column has been renamed from Postmining Disturbed Areas to Disturbed Acreage.

Comment SP 9 – Round 1

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please add to the Ch. 4 reference in the first sentence on this page that the Handbook of Approved Sampling and Statistical Methods for Evaluation of Revegetation Success on Wyoming Coal Mines.

Response SP 9 – Round 1

Revised Section RP.6.4.1 as requested.

Comment SP 9 – Round 2

No comment received.

Response SP 9 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 9 – Round 3

The response is satisfactory. A reference to the Handbook of Approved Sampling and Statistical Methods for Evaluation of Revegetation Success on Wyoming Coal Mines has been added.

Comment SP 10 – Round 1

Reclamation Plan, Page RP-17. Section RP.6.4.1. Please remove the first sentence in the third paragraph. It appears in conflict with the next sentence which cites Ch. 4.Sec. 2(d)(ii)(B).

Response SP 10 – Round 1

Removed sentence as requested in Section RP.6.4.1.

Comment SP 10 – Round 2

No comment received.

Response SP 10 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 10 – Round 3

The response is satisfactory. The conflicting citation has been removed.

Comment SP 11 – Round 1

Reclamation Plan, Page RP-19. Section RP.6.4.5.1. Please add a third sentence to the first paragraph to Pastureland land use with a full shrub density greater than 1 shrub/m2 is also eligible.

Response SP 11 – Round 1

Sentence including pastureland land use as eligible added to Section RP.6.4.5.1 as requested.

Comment SP 11 – Round 2

No comment received.

Response SP 11 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 11 – Round 3

The response is satisfactory. Pastureland with greater than 1 shrub/m2 has been corrected to be eligible.

Comment SP 12 – Round 1

Reclamation Plan, Page RP-24. Please revise the sentence after the ● Shrub density bullet to "Additionally, a species list will be prepared" and delete the remainder of the sentence.

Response SP 12 – Round 1

Revised text as requested.

Comment SP 12 – Round 2

No comment received.

Response SP 12 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 12 – Round 3

The response is satisfactory. The sentence has been revised.

Comment SP 13 – Round 1

Reclamation Plan, Page RP-25. Section RP.6.7.3. Under Sampling Frequency in Guideline 14 the third sample may be included as part of your revegetation success (bond release) sampling which can begin in year seven. You may add more flexibility

to your sampling interval such as beginning year 3 or 4, with the second sampling in year 5, 6 or 7 and then the third may be year 7 – 13 and may be used for revegetation success.

Response SP 13 – Round 1

Revised text per recommendations.

Comment SP 13 – Round 2

No comment received.

Response SP 13 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 13 – Round 3

This is confusing. Please use the following language for the section. Sampling will begin in year 3 or 4 after seeding. The second sampling will occur in year 6 or 7 after seeding and the third sampling which may be used for final revegetation success will occur by year 13 or 14 after seeding. In the event the bond period for specific monitoring areas exceeds ten years, additional sampling will occur every five years after the third sample until final bond release.

Response SP 13 – Round 3

RAMACO acknowledges that the text may be confusing. Reclamation Plan text will remain as is.

Comment SP 14 – Round 1

Reclamation Plan, Page RP-29. Section RP.7.2. There is a reference to RP.8 in this section. Please correct the reference if it is not correct.

Response SP 14 – Round 1

Revised text to reference Section RP.6 for seed mixtures and revegetation operations.

Comment SP 14 – Round 2

No comment received.

Response SP 14 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 14 – Round 3

The response is satisfactory. The reference has been corrected.

Comment SP 15 – Round 1

Reclamation Plan, Table RP6.1. Could you please add a footnote listing the disturbances that are included in the 87.3 acres of Disturbance and what the disturbances will be postmining in the 56.1 acres.

Response SP 15 – Round 1

Added footnote describing disturbance for premining and postmining to Table RP.6-1 as requested.

Comment SP 15 – Round 2

No comment received.

Response SP 15 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 15 – Round 3

The response is satisfactory. The types of disturbance have been listed.

Comment SP 16 – Round 1

Reclamation Plan, Exhibit RP.2-1. Postmining the landuse will be Grazingland and Fish and Wildlife Habitat (937.7 acres) and Cropland (3.7 acres) with 56.1 acres of disturbance, 4.9 acres of water and 11.6 acres of wetland. These landuses will match the landuses on Exhibit D1.1-1. With just minor acreage changes shown in Table RP.6-1. Since the railroad and major roads are identified and Taylor Quarry is going to be reclaimed to Grazingland and Fish and Wildlife Habitat, the Industrial commercial stippling is not needed on these areas.

Response SP 16 – Round 1

Revised exhibit as requested.

Comment SP 16 – Round 2

No comment received.

Response SP 16 – Round 2

Round 1 response assumed to be adequate. No response is necessary.

Comment SP 16 – Round 3

The response is satisfactory. Exhibit RP.2-1 has been revised to Grazingland for the reclamation of the Taylor Quarry.

Comment SP 17– Round 3 (New Comment)

Please correct tables or text that list the new affected area. This acreage should match the acreage listed on your Form 1.

Response SP 17 – Round 3 (New Comment)

Tables RP.6-3 has been revised to include a note stating the affected area acreage outside the disturbance boundary has been excluded from shrub density calculations because this acreage will be undisturbed during mining operations except for potential subsidence. No other tables have been revised in response to this comment. Form 1 has been updated with the revised affected area acreage in Adjudication.

Comment SP 18– Round 3 (New Comment)

The shrub density standard is based on the affected acreage which is listed on your Form 1. Please make any needed changes to your shrub density tables and maps.

Response SP 18 – Round 3 (New Comment)

Tables RP.6-3 has been revised to include a note stating the affected area acreage outside the disturbance boundary has been excluded from the shrub density calculations because this acreage will be undisturbed during mining operations except for potential subsidence. Form 1 has been updated with the revised affected area acreage in Adjudication.

Other Comments

Comment MK 27 – Round 1

Items Requested in Electronic Format for Preparation of CHIA, 1. Please provide a CAD or ArcGIS shapefile that contains the proposed permit boundary for the Brook Mine. This file will be used to prepare maps in the CHIA. This file can be emailed to: matthew.kunze@wyo.gov. (MDK)

Response MK 27 – Round 1

See response to comment MK 28.

Comment MK 27 – Round 2

Response to the comment is pending. Review of the response to this comment will be completed when the information is received. (MDK)

Response MK 27 – Round 2

The permit boundary in CAD format was provided as an attachment in an e-mail dated September 1, 2015.

Comment MK 27 – Round 3

Response accepted.

Comment MK 28 – Round 1

Items Requested in Electronic Format for Preparation of CHIA, 2. Please provide the baseline surface and groundwater data collected to support baseline characterization for the permit application. All data can be submitted on Excel templates (Attachments) found on the LQD website for the Coal Annual Report Format (CARF): http://deq.wyoming.gov/lqd/coal/resources/annual-report-3/.

• Please provide all surface water flow and water quality data for the following surface water stations: SM578415-SW-1, SM578409-SW-1, SM578418-SW-1, and SM578512-SW-1.

• Please provide all groundwater level and water quality data for all Brook Mine monitoring wells shown in Table D6.2-1.

Response MK 28 – Round 1

The electronic data requested is being compiled in the requested format and will be provided when it is completed.

Comment MK 28 – Round 2

Response to the comment is pending. Review of the response to this comment will be completed when the information is received. (MDK)

Response MK 28 – Round 2

The electronic data in CARF format was provided as an attachment in an e-mail dated September 1, 2015.

Comment MK 28 – Round 3

Response accepted.

Comment MuK 97 – Round 2 (New Comment)

In the next submittal, please consider providing a text tracking mechanism that will highlight the changes that are made in response to the comments. Typically, it can be a bolded font for all the text that is revised. This will help the reviewer to review the appropriate revised text. Without this bold font or some distinct highlight for the revised text, the reviewer has to compare against the initial submittal to get a handle on the changes that were made in response to the LQD comments.

Response MuK 97 – Round 2 (New Comment)

RAMACO will coordinate with WDEQ to facilitate review in anyway once WDEQ has determined the method that is most suitable (as per the meeting on September 1, 2015). In the meantime, RAMACO has attempted to make it as clear as possible in comment responses what the location of textual changes has been. Additionally, please refer to the Change Index for locations of replaced or added text, tables, and figures. Also, any page with new changes will be updated with the submittal month and year in the footer. Pages in the permit without changes will maintain previous dates.

Comment MuK 97 – Round 3

Response accepted.

INDEX SHEET FOR MINE PERMIT AMENDMENTS OR REVISIONS

Date December 8, 2015
TFN 6 2/025

MINE COMPANY NAME: RAMACO, LLC.

MINE NAME: Brook Mine
PERMIT NO. TFN 6 2/025

Statement: I, Jeff Barron, an authorized representative of RAMACO, LLC. declared that only the items listed on this and all consecutively numbered Index Sheets are intended as revisions to the current permit document. In the event that other changes inadvertently occurred due to this revision, those unintentional alterations will not be considered approved. Please initial and date.

NOTES: 1) Include all revision or change elements and a brief description of, or reason for, each revision element.
2) **This Change Index is for only those changes made during Round 3 Comment Response.**

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume I	Adjudication Form 1-1 to Adjudication Form 1-4 (Form 1 tab)	Adjudication Form 1-1 to Adjudication Form 1-4 (Form 1 tab)	Update acreage to be affected.
Volume I		Adjudication Insurance-5(Insurance tab)	Add updated certificate of liability insurance.
Volume IV	D5-12 (Appendix D5 Text tab)	D5-12 (Appendix D5 Text tab)	Add “groundwater flows” to the middle of the third sentence in Section D5.3.3.4.
Volume IV	Addendum D5-4 Exhibit 1 (Addendum D5-4 tab)	Addendum D5-4 Exhibit 1 (Addendum D5-4 tab)	Provide Exhibit 1 Overburden Isopach Overlying the Carney Coal Seam.
Volume V	D6-2 (Appendix D6 Text tab)	D6-2 (Appendix D6 Text tab)	Revise discussion of ephemeral streams in the fifth sentence of the third paragraph of Section D6.1.2. Add sentence in the center of the third paragraph of Section D6.1.2 regarding Slater Creek as an intermittent stream. Add sentence in the center of the third paragraph of Section D6.1.2 regarding the intermittent stream definition.
Volume V	D6-10 to D6-11 (Appendix D6 Text tab)	D6-10 to D6-11 (Appendix D6 Text tab)	Add “mostly” to the first sentence in the first paragraph of Section D6.1.5.2. Revise the third paragraph of Section D6.1.5.2 to describe Slater Creek as an intermittent stream. Revise the fifth sentence in the second paragraph of Section D6.1.5.3. editing “ephemeral” to “low flow”.
Volume V	D6-17 to D6-19 (Appendix D6 Text tab)	D6-17 to D6-19 (Appendix D6 Text tab)	Discussion of the potentiometric head differences between alluvium and Carney coal as it relates to CBNG dewatering has been added to the end of the second paragraph in Section D6.2.2.2
Volume V	D6-T17 (Appendix D6 Tables tab)	D6-T17 (Appendix D6 Tables tab)	Revise Table D6.1-11 monitoring location northings and eastings for locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1.
Volume V	Exhibit D6.1-2 (Appendix D6 Exhibits tab)	Exhibit D6.1-2 (Appendix D6 Exhibits tab)	Revise surface water monitoring locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1.
Volume VI	D7-3 (Appendix D7 Text tab)	D7-3(Appendix D7 Text tab)	Revise reference in the fourth sentence in the fourth paragraph of Section D7.2 from (Schellinger, 2014) to (WDEQ-LQD, 2014b).

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume VI	D7-32 to D7-34 (Appendix D7 Text tab)	D7-32 to D7-34 (Appendix D7 Text tab)	Revise reference section by removing Schellinger, 2014 reference and adding Wyoming Department of Environmental Quality–Land Quality Division (WDEQ-LQD), 2014b reference.
Volume VI	Figure D7.1-1 (Appendix D7 Figures tab)	Figure D7.1-1 (Appendix D7 Figures tab)	Update the location of trench TR-1 and associated highwall panel.
Volume VII	Exhibit D8.2-1(Appendix D8 Exhibits tab)	Exhibit D8.2-1(Appendix D8 Exhibits tab)	Revise study area boundary.
Volume VII	Addendum D8-1-4 (Addendum D8-1 tab)	Addendum D8-1-4 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage throughout Section D8-1.1.
Volume VII	Addendum D8-1-14 to Addendum D8-1-16 (Addendum D8-1 tab)	Addendum D8-1-14 to Addendum D8-1-16 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Sections D8-1.3.1, D8-1.3.2 and D8-1.3.3.
Volume VII	Addendum D8-1-18 (Addendum D8-1 tab)	Addendum D8-1-18 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Section D8-1.3.4.
Volume VII	Addendum D8-1-20 to Addendum D8-1-21 (Addendum D8-1 tab)	Addendum D8-1-20 to Addendum D8-1-21 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Sections D8-1.3.5 and D8-1.3.6.
Volume VII	Addendum D8-1-23 to Addendum D8-1-24 (Addendum D8-1 tab)	Addendum D8-1-23 to Addendum D8-1-24 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Sections D8-1.3.7 and D8-1.3.8.
Volume VII	Addendum D8-1-26 (Addendum D8-1 tab)	Addendum D8-1-26 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Section D8-1.3.9.
Volume VII	Addendum D8-1-28 (Addendum D8-1 tab)	Addendum D8-1-28 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Section D8-1.3.10.
Volume VII	Addendum D8-1-30 to Addendum D8-1-31 (Addendum D8-1 tab)	Addendum D8-1-30 to Addendum D8-1-31 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage, vegetation community acreage and percentage of Brook Mine Study Area acreage in Sections D8-1.3.11 and D8-1.3.12.
Volume VII	Addendum D8-1-35 to Addendum D8-1-36 (Addendum D8-1 tab)	Addendum D8-1-35 to Addendum D8-1-36 (Addendum D8-1 tab)	Revise Brook Mine Study Area acreage and vegetation community acreage in Section D8-1.8.
Volume VII	Addendum D8-1-41 (Addendum D8-1 tab)	Addendum D8-1-41 (Addendum D8-1 tab)	Revise vegetation community acreages for Brook Mine Study Area in Table D8-2.
Volume VII	Addendum D8 Map 1 (Addendum D8-1 tab)	Addendum D8 Map 1 (Addendum D8-1 tab)	Revise study area boundary.
Volume X	D11-i (Appendix D11 TOC tab)	D11-i (Appendix D11 TOC tab)	Update TOC.
Volume X	D11-4 (Appendix D11 Text tab)	D11-4 (Appendix D11 Text tab)	Revise the last sentence in the second paragraph of Section D11.3 to describe Slater Creek as an intermittent stream.

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume X	D11-11 to D11-14 (Appendix D11 Text tab)	D11-11 to D11-14 (Appendix D11 Text tab)	Add discussion of Conable Reservoir and Conable Ditch and Lateral in the fourth paragraph of Section D11.5. Add discussion of the planned minor AVF disturbance to the first paragraph in Section D11.7 and add references to Mine Plan Section MP.25 and Reclamation Plan Section RP.10 for further discussion of the AVF disturbance.
Volume XI	MP-ii (Mine Plan TOC tab)	MP-ii (Mine Plan TOC tab)	Update TOC.
Volume XI	MP-5 (Mine Plan Text tab)	MP-5 (Mine Plan Text tab)	Revise description of disturbance and affected area boundaries in the second paragraph of Section MP.1.3.
Volume XI	MP-14 (Mine Plan Text tab)	MP-14 (Mine Plan Text tab)	Add sentence regarding depth staking to end of bullet item 1 in the first paragraph of Section MP.4.2.1.
Volume XI	MP-18 (Mine Plan Text tab)	MP-18 (Mine Plan Text tab)	Add commitment to conduct overburden sampling and analysis to the end of Section MP.4.3. Add commitment to prevent overburden materials from shifting on native topsoil areas during removal operations at the end of Section MP.4.3.1.
Volume XI	MP-24 to MP-26 (Mine Plan Text tab)	MP-24 to MP-26 (Mine Plan Text tab)	Add sentence that mine trenches serve as sediment control as the sixth sentence of the first paragraph of Section MP.5.1. Revise the seventh sentence of the first paragraph of Section MP.5.1 to include discussion of mine trench locations. Add discussion of the wastewater impoundment to the end of Section MP.5.2.
Volume XI	MP-43 (Mine Plan Text tab)	MP-43 (Mine Plan Text tab)	Add fifth sentence from the end in fifth paragraph of Section MP.6.1 that a 100 foot buffer boundary of Slater Creek will be marked in the field prior to mining related disturbance.
Volume XI	MP-48 to MP-49 (Mine Plan Text tab)	MP-48 to MP-49 (Mine Plan Text tab)	The second paragraph of Section MP.7.1has been revised to clarify the commitment to obtain direct discharge measurements to evaluate the rating curves.
Volume XI	MP-76 to MP-77 (Mine Plan Text tab)	MP-76 to MP-77 (Mine Plan Text tab)	Revise the discussion of disturbed AVFs in the second paragraph of Section MP.25. Add commitment to install monitoring wells prior to commencing mining related disturbance in the center of the fifth paragraph of Section MP.25.
Volume XI	MP-T1 (Mine Plan Tables tab)	MP-T1 (Mine Plan Tables tab)	Update Table MP.1-1 trench mining and facilities disturbance acreage for trench TR-1 revision.
Volume XI	MP-T5 (Mine Plan Tables tab)	MP-T5 (Mine Plan Tables tab)	Update Table MP.4-1 with revised topsoil volumes and stripping areas for trench TR-1 revision.
Volume XI	MP-T6 (Mine Plan Tables tab)	MP-T6 (Mine Plan Tables tab)	Update Table MP.4-2 with revised topsoil volumes for trench TR-1 revision.
Volume XI	MP-T7 (Mine Plan Tables tab)	MP-T7 (Mine Plan Tables tab)	Update Table MP.4-3 with revised capacity for pile TS-1b for trench TR-1 revision.
Volume XI	MP-T16 (Mine Plan Tables tab)	MP-T16 (Mine Plan Tables tab)	Revise Table MP.7-1 monitoring location northings and eastings for locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1.

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume XI	Exhibit MP.1-1 (Mine Plan Exhibits tab)	Exhibit MP.1-1 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and the footprint of overburden pile OB-3.
Volume XI	Exhibit MP.3-1 (Mine Plan Exhibits tab)	Exhibit MP.3-1 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and its associated highwall mining panels.
Volume XI	Exhibit MP.4-1 (Mine Plan Exhibits tab)	Exhibit MP.4-1 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and its associated highwall mining panels.
Volume XI	Exhibit MP.4-2 (Mine Plan Exhibits tab)	Exhibit MP.4-2 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and the footprint of overburden pile OB-3.
Volume XI	Exhibit MP.4-3 (Mine Plan Exhibits tab)	Exhibit MP.4-3 (Mine Plan Exhibits tab)	Revise the location of topsoil pile TS-1B and overburden pile OB-3.
Volume XI	Exhibit MP.4-4 (Mine Plan Exhibits tab)	Exhibit MP.4-4 (Mine Plan Exhibits tab)	Revise the location of trench TR-1.
Volume XI	Exhibit MP.4-5 (Mine Plan Exhibits tab)	Exhibit MP.4-5 (Mine Plan Exhibits tab)	Revise the location of trench TR-1.
Volume XI	Exhibit MP.5-1 (Mine Plan Exhibits tab)	Exhibit MP.5-1 (Mine Plan Exhibits tab)	Add 100 foot intermittent stream buffer boundary to Slater Creek within the permit area. Revise the location of trench TR-1. Revise the location of topsoil pile TS-1B and overburden pile OB-3. Revise sediment pond SP-4 and add sediment pond SP-8.
Volume XI	Exhibit MP.7-1 (Mine Plan Exhibits tab)	Exhibit MP.7-1 (Mine Plan Exhibits tab)	Revise surface water monitoring locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1.
Volume XI	Exhibit MP.15-1 (Mine Plan Exhibits tab)	Exhibit MP.15-1 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and its associated highwall mining panels.
Volume XI	Exhibit MP.15-2 (Mine Plan Exhibits tab)	Exhibit MP.15-2 (Mine Plan Exhibits tab)	Revise the location of trench TR-1 and its associated highwall mining panels.
Volume XI	Addendum MP-2-2 (Addendum MP-2 tab)	Addendum MP-2-2 (Addendum MP-2 tab)	Revise Addendum MP-2 Table of Contents to include additional sediment pond design SP-8.
Volume XI	Addendum MP-2 Exhibit 2 (Addendum MP-2 tab)	Addendum MP-2 Exhibit 2 (Addendum MP-2 tab)	Switch locations of overburden stockpile OB-3 and topsoil stockpile TS-1B.
Volume XI	Addendum MP-2 Exhibit 3 Sheets 1 and 2 (Addendum MP-2 tab)	Addendum MP-2 Exhibit 3 Sheets 1 and 2 (Addendum MP-2 tab)	Switch locations of overburden stockpile OB-3 and topsoil stockpile TS-1B.
Volume XI	Addendum MP-2 Exhibit 4 Sheets 1 and 2 (Addendum MP-2 tab)	Addendum MP-2 Exhibit 4 Sheets 1 and 2 (Addendum MP-2 tab)	Switch locations of overburden stockpile OB-3 and topsoil stockpile TS-1B.
Volume XI	Addendum MP-2 Exhibit 5 (Addendum MP-2 tab)	Addendum MP-2 Exhibit 5 (Addendum MP-2 tab)	Switch locations of overburden stockpile OB-3 and topsoil stockpile TS-1B.

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume XI		Addendum MP-2 Exhibit 13 Sheets 1 and 2 (Addendum MP-2 tab)	Add sediment pond design for SP-8.
Volume XI	Addendum MP-3-4 to Addendum MP-3-5 (Addendum MP-3 tab)	Addendum MP-3-4 to Addendum MP-3-5 (Addendum MP-3 tab)	Revise maximum modeled drawdown from 23.1 feet to 25.8 feet in second sentence of Impacts Section. Revise maximum loss of available head from 23.1 feet to 25.8 feet in bullet item b. in Conclusion Section.
Volume XI	Addendum MP-3-30 (Addendum MP-3 tab)	Addendum MP-3-30 (Addendum MP-3 tab)	Revise Groundwater Vistas Version from 6 to 6.8 Build 1 in the first sentence of Section 3.1.
Volume XI	Addendum MP-3-49 to Addendum MP-3-50 (Addendum MP-3 tab)	Addendum MP-3-49 to Addendum MP-3-50 (Addendum MP-3 tab)	Revise Table 4.7-1 with updated values. Revise text throughout the third paragraph of Section 4.7.2.
Volume XI	Addendum MP-3-54 to Addendum MP-3-69 (Addendum MP-3 tab)	Addendum MP-3-54 to Addendum MP-3-69 (Addendum MP-3 tab)	Revise Figure 4.7-4 with updated values. Revise Table 4.8-1, Table 4.8-2, Table 4.8-3 and Table 4.8-4 with updated values. Revise last sentence in the first paragraph of Section 4.8.4 editing “relatively” to “not a highly”. Add discussion of trench TR-1 movement to center of the first paragraph in Section 4.9. Revise Figures 4.9-1, 4.9-2, 4.9-3, 4.9-4, 4.9-5, 4.9-6, 4.9-7, 4.9-8, 4.9-9, 4.9-10 with updated trench TR-1 location. Revise values in Table 4.9-1.
Volume XI	Addendum MP-3-71 to Addendum MP-3-72 (Addendum MP-3 tab)	Addendum MP-3-71 to Addendum MP-3-72 (Addendum MP-3 tab)	Revise Figure 4.9-11with updated trench TR-1 location. Revise the fifth paragraph in Section 4.9. Revise Table 4.9-2 with updated values.
Volume XI	Addendum MP-3-77 (Addendum MP-3 tab)	Addendum MP-3-77 (Addendum MP-3 tab)	Revise Table 4.10-1 with updated values and add note regarding Sx and Tx designations.
Volume XI	Addendum MP-3-101 to Addendum MP-3-112 (Addendum MP-3 tab)	Addendum MP-3-101 to Addendum MP-3-112 (Addendum MP-3 tab)	Revise Appendix B figures with updated trench TR-1 location.
Volume XI	Exhibit MP-9-1 (Addendum MP-9 tab)	Exhibit MP-9-1 (Addendum MP-9 tab)	Revise the locations of trench TR-1 and the footprint of overburden pile OB-3.
Volume XII	RP-9 (Rec Plan Text tab)	RP-9 (Rec Plan Text tab)	Revise the end of the second paragraph in Section RP.5.6 to discuss sediment control procedures being used until Phase II Bond Release Verification has been approved.
Volume XII	RP-45 (Rec Plan Text tab)	RP-45 (Rec Plan Text tab)	Revise first paragraph of Section RP.8.5.2 to describe Slater Creek as an intermittent stream.
Volume XII	RP-60 to RP-61 (Rec Plan Text tab)	RP-60 to RP-61 (Rec Plan Text tab)	Add discussion of reclamation and hydrologic functions of disturbed AVFs throughout Section RP.10. Add commitment to install alluvial monitoring wells prior to commencing mining related disturbance in Section RP.10.
Volume XII	RP-T5 (Rec Plan Tables tab)	RP-T5 (Rec Plan Tables tab)	Revise Table RP.6-3 by adding a note regarding the affected area acreage excluded from the shrub density calculations due to the area not being disturbed by direct mining operations and only potentially affected by potential subsidence.

INDEX SHEET FOR MINE PERMIT AMENDMENTS OR REVISIONS

Date December 8, 2015
TFN 6 2/025

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
Volume XII	RP-T8 (Rec Plan Tables tab)	RP-T8 (Rec Plan Tables tab)	Revise Table RP.6-6 to change vegetation community acreages from Brook Mine Study Area to Brook Mine Permit Area acreages. Revise heading of Postmining Disturbed Areas to Disturbed Acreage.
Volume XII	Exhibit RP.5-1 (Rec Plan Exhibits tab)	Exhibit RP.5-1 (Rec Plan Exhibits tab)	Revise the location of topsoil pile TS-1B.
Volume XII	Exhibit RP.8-5 (Rec Plan Exhibits tab)	Exhibit RP.8-5 (Rec Plan Exhibits tab)	Revise surface water monitoring locations: SM578512-SW-1, SM578418-SW-1, SM578409-SW-1 and SM578415-SW-1

From:	Matthew Kunze
To:	BJ Kristiansen
Subject:	Re: FW: Brook Mine Round 3 responses, TFN 6 2/025
Date:	Friday, December 18, 2015 9:18:36 AM
Attachments:	image001.jpg

Ok, thanks Bj for the files.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Fri, Dec 18, 2015 at 9:17 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Here Matt.....
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Friday, December 18, 2015 8:13 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** RE: Brook Mine Round 3 responses, TFN 6 2/025
>
> BJ,
>
> Find attached the compiled responses and index of change
>
> ---
>
> **From:** BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
> **Sent:** Friday, December 18, 2015 8:12 AM
> **To:** Jeff Barron
> **Subject:** Brook Mine Round 3 responses, TFN 6 2/025
>
> Jeff,
>
> I can't find the response sheets in the electronic materials you left here the other

day. Could I get an electronic copy of the response sheets so I can do comparisons without having to visit the library every time I need to work with the files?

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Muthu Kuchanur
Subject:	Re: FW: Brook Mine Round 3 responses, TFN 6 2/025
Date:	Friday, December 18, 2015 9:23:02 AM
Attachments:	image001.jpg

I have placed the responses at:

F:\Division\LQD\PERMITS\TFN 6 2-025 Brook Mine\Round 3 Responses to Comments recd 12-8-15

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Fri, Dec 18, 2015 at 9:17 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Here Matt.....
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Friday, December 18, 2015 8:13 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** RE: Brook Mine Round 3 responses, TFN 6 2/025
>
> BJ,
>
> Find attached the compiled responses and index of change
>
> ---
>
> **From:** BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
> **Sent:** Friday, December 18, 2015 8:12 AM
> **To:** Jeff Barron
> **Subject:** Brook Mine Round 3 responses, TFN 6 2/025
>
> Jeff,

I can't find the response sheets in the electronic materials you left here the other day. Could I get an electronic copy of the response sheets so I can do comparisons without having to visit the library every time I need to work with the files?

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	Alan Edwards; BJ Kristiansen; Kyle Wendtland
Subject:	Fwd: Concerns regarding Ramaco permit
Date:	Friday, December 18, 2015 9:26:56 AM
Attachments:	2015 12-15 ltr to DEQ re Ramaco permit.pdf

Alan,

Kyle asked me to forward the attached letter from the Powder River Basin Resource Council to you. He has also asked that I respond to Ms. Anderson stating a response will be sent from you as Kyle cannot respond due to a conflict of interest. Please let BJ or I know if you have any questions/concerns.

Thanks,
Mark
---------- Forwarded message ----------
From: **Shannon Anderson** <sanderson@powderriverbasin.org>
Date: Tue, Dec 15, 2015 at 3:37 PM
Subject: Concerns regarding Ramaco permit
To: kyle.wendtland@wyo.gov
Cc: Mark Rogaczewski <mark.ROGACZEWSKI@wyo.gov>, Bj Kristiansen <bj.kristiansen@wyo.gov>, andrew kuhlmann <andrew.kuhlmann@wyo.gov>

Dear Kyle,

Please see the attached letter regarding the Ramaco coal mine permit. We look forward to your and your staff's response.

Thank you,

Shannon

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

ENCOURAGING RESPONSIBLE DEVELOPMENT TODAY ~ FOR TOMORROW

934 N. MAIN ST. SHERIDAN, WY 82801 (307) 672-5809 FAX (307) 672-5800
INFO@POWDERRIVERBASIN.ORG WWW.POWDERRIVERBASIN.ORG

POWDER RIVER BASIN
Resource Council

Via electronic and first-class mail

Kyle Wendtland, Administrator
Wyoming Department of Environmental Quality
Land Quality Division
200 West 17th Street, Garden Level
Cheyenne, WY 82002
kyle.wendtland@wyo.gov

December 15, 2015

Dear Mr. Wendtland,

We are writing to follow-up on concerns we have about the Brook Mine permit application submitted by Brook Mining Company, LLC, a wholly owned subsidiary of Ramaco, LLC. We ask that DEQ consider our concerns and respond to us, in writing, regarding our questions and what the agency's course of action will be in response.

In March, we wrote to DEQ with the following concern:

> First, it seems unlikely that Ramaco will actually be the operator of the Brook Mine. Based on information publicly available on the company's website and from what we have heard about the company from landowners and other parties, it does not appear that the company has the staff and expertise capable of operating a coal mine. DEQ regulations require "complete identification" of "[t]he names, addresses and telephone numbers of any operators, if different from the applicant." Land Quality Rules & Regulations (hereafter "LQRR") Ch. 2 § 2(a)(i). Upon our review of the application, Ramaco did not identify who the operator of the coal mine would be. Please verify that Ramaco will indeed be the operator of the proposed mine and if so, that they have the necessary staff and expertise to in fact operate the mine. If an additional operator is proposed, please require Ramaco to identify that operator in its permit to mine.

Based on our continued review of the permit application and supplemental information provided in response to DEQ's technical review questions, it does not seem this issue has been addressed. It is our understanding that while Ramaco has a local "office," the company does not actually have staff that would be able to carry out mining activities should the company receive a permit. We therefore renew our concerns that the Ramaco permit application is not complete and the company must disclose who the operator of the coal mine will be.

Thank your for your attention to our concerns. We look forward to your response.

Sincerely,

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St.
Sheridan, WY 82801
(307) 672-5809
sanderson@powderriverbasin.org

From: Mark Rogaczewski
To: Shannon Anderson
Cc: Kyle Wendtland; Bj Kristiansen; andrew kuhlmann
Subject: Re: Concerns regarding Ramaco permit
Date: Friday, December 18, 2015 9:30:27 AM

Shannon,

The Land Quality Division is in receipt of your attached letter. A response will be forthcoming from Mr. Alan Edwards - Deputy Director - Department of Environmental Quality. Mr. Wendtland cannot respond to the questions raised by the Powder River Basin Resource Council due to a conflict of interest with the processing of the RAMACO Brook Mine coal mine permit application.

Please feel free to contact me if you have any questions.

Merry Christmas,

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov
On Tue, Dec 15, 2015 at 3:37 PM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Dear Kyle,
>
> Please see the attached letter regarding the Ramaco coal mine permit. We look forward to your and your staff's response.
>
> Thank you,
>
> Shannon
>
> Shannon Anderson
>
> Powder River Basin Resource Council
>
> 934 N. Main St., Sheridan, WY 82801
>
> 307-672-5809 cell: 307-763-0995
>
> sanderson@powderriverbasin.org

> Join us at www.powderriverbasin.org
>
> Follow us at https://twitter.com/PRBResCouncil

--

From: Alan Edwards
To: Mark Rogaczewski
Cc: BJ Kristiansen; Kyle Wendtland
Subject: Re: Concerns regarding Ramaco permit
Date: Friday, December 18, 2015 9:34:32 AM

Thanks Mark. I will look it over and try to get back to everyone next week. Alan

Sent from my iPhone

On Dec 18, 2015, at 10:26 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan,
>
> Kyle asked me to forward the attached letter from the Powder River Basin Resource Council to you. He has also asked that I respond to Ms. Anderson stating a response will be sent from you as Kyle cannot respond due to a conflict of interest. Please let BJ or I know if you have any questions/concerns.
>
> Thanks,
> Mark
> ---------- Forwarded message ----------
> From: **Shannon Anderson** <sanderson@powderriverbasin.org>
> Date: Tue, Dec 15, 2015 at 3:37 PM
> Subject: Concerns regarding Ramaco permit
> To: kyle.wendtland@wyo.gov
> Cc: Mark Rogaczewski <mark.ROGACZEWSKI@wyo.gov>, Bj Kristiansen <bj.kristiansen@wyo.gov>, andrew kuhlmann <andrew.kuhlmann@wyo.gov>
>
> Dear Kyle,
>
> Please see the attached letter regarding the Ramaco coal mine permit. We look forward to your and your staff's response.
>
> Thank you,
>
> Shannon
>
> Shannon Anderson
>
> Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

<2015 12-15 ltr to DEQ re Ramaco permit.pdf>

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Muthu Kuchanur
To: Matthew Kunze
Subject: Re: FW: Brook Mine Round 3 responses, TFN 6 2/025
Date: Friday, December 18, 2015 10:17:59 AM
Attachments: image001.jpg

Thanks Matt.

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82001

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Fri, Dec 18, 2015 at 9:22 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> I have placed the responses at:
>
> F:\Division\LQD\PERMITS\TFN 6 2-025 Brook Mine\Round 3 Responses to Comments recd 12-8-15
>
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 200 West 17th Street, Lower Level
> Cheyenne, WY 82002
> 307-777-7055
>
>
> On Fri, Dec 18, 2015 at 9:17 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
> > Here Matt.....
> >
> > ---
> >
> > **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> > **Sent:** Friday, December 18, 2015 8:13 AM
> > **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> > **Subject:** RE: Brook Mine Round 3 responses, TFN 6 2/025
> >
> > BJ,

Find attached the compiled responses and index of change

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Friday, December 18, 2015 8:12 AM
To: Jeff Barron
Subject: Brook Mine Round 3 responses, TFN 6 2/025

Jeff,

I can't find the response sheets in the electronic materials you left here the other day. Could I get an electronic copy of the response sheets so I can do comparisons without having to visit the library every time I need to work with the files?

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	andrew kuhlmann
Subject:	Ramaco
Date:	Monday, December 21, 2015 8:47:31 AM

I have reviewed the PRBRC letter forwarded by Mark Rogaczewski and would like to discuss when you get a chance. Give me a call on my cell when you have a few minutes. Thanks Andrew Alan

--

Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	BJ Kristiansen
Subject:	Re: Brook Mine Permit Application, ROUND 3 comment responses and Round 4 comments, TFN 6 2/025
Date:	Monday, December 21, 2015 3:01:05 PM
Attachments:	MDK_Fourth Round Review on Brook Mine New Permit Application_TFN 6 2-025.docx

Bj,

Please find my review of responses to my 3rd round comments. All comments have been resolved except for one.

As part of Round 2, RAMACO removed the plan to use a well for water use and instead proposed to primarily use surface water rights. Since these are going to presumably be new surface water rights, I believe a discussion in the PHC is warranted on the possible reduction in surface water flows off the proposed permit area. This information would also be needed for the CHIA. So for new comment No. 124 for the Round 3, I asked for this analysis in the mine plan PHC. However the PHC was not updated in the response.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Thu, Dec 10, 2015 at 1:13 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I'll check with Jeff baron to see when we may expect an electronic copy. I'll keep you posted.
>
> -bj
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Thursday, December 10, 2015 11:46 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Cc:** Muthu Kuchanur <muthu.kuchanur@wyo.gov>
> **Subject:** Re: Brook Mine Permit Application, ROUND 3 comment responses and Round 4 comments, TFN 6 2/025

Bj,

As we have been doing throughout, can you or WWC please provide us an electronic copy of both the response letter and new materials.

Thanks, Matt

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

200 West 17th Street, Lower Level

Cheyenne, WY 82002

307-777-7055

On Thu, Dec 10, 2015 at 11:31 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Folks,
>
> We received the Brook mine Round 3 comment responses back from Ramaco/WWC on December 8, 2015. The 30 review period will end on January 7, 2016. Since we met with WWC last week, I believe that most of our comments have been answered to LQD standards. Please review the segments that you were responsible for and perform a Round 4 assessment, if necessary. If you do have comments, please meet with me as soon as possible so the issues can be resolved with WWC/Ramaco in a timely manner. I would like to resolve any commentary by the end of the year, if possible. We are at a point where the only meaningful outstanding issues are the AVF determination, The CHIA, and surface use differences.
>
> Let me know if there are any problems with the review schedule, since we have Christmas and New Year's coming up.

-bj

Bj Kristiansen, P.G.

Department of Environmental Quality

Natural Resources Program Principal

Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Matt Kunze, LQD Division Services

DATE: December 21, 2015

SUBJECT: Fourth Round Comments on Brook Mine Permit Application (TFN 6 2/025)

Responses to third round comments on the Brook Mine permit application (TFN 6 2/025) were received by the Cheyenne LQD on December 18, 2015. The following is a review of the responses to my third round comments on the application.

Appendix D6-Hydrology

Section D6.1.2 Drainage Basin Description
Comment MK 29. Response accepted. (MDK)

Section D6.1.5.1 Monitoring Stations
Comment MK 35. Response accepted. (MDK)

Addendum D6-5 – Rating Curves
Comment MK 43. Response accepted. (MDK)

Appendix D11-AVF

Section D11.7 Mining of Alluvial Valley Floor
Comment MK 21. Response accepted. (MDK)

Mine Plan

Section MP.7.1 Surface Water Monitoring
Comment MK 106. Response accepted. (MDK)

Comment MK 116. Response accepted. (MDK)

Reclamation Plan

Section RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors
Comment MK 24. Response accepted. (MDK)

New Comments

Adjudication-Form 1

Comment MK 120. Response accepted. (MDK)

Appendix D-11 (AVF)

D11.5 Agricultural Practices
Comment MK 121. Response accepted. (MDK)

D11.7 Mining of the Alluvial Valley Floor
Comment MK 122. Response accepted. (MDK)

Mine Plan

MP.1.3 Acreage to Be Affected Annually
Comment MK 123. Response accepted. (MDK)

MP.8 Water Use
Comment MK 124. Response not accepted. The Mine Plan PHC (Section MP.6.1) was not updated as requested to account for the plan to use surface water rights to provide up to 69 percent of the mine's water use. An analysis is required in the Mine Plan PHC to provide the percent reduction in water quantity from the proposed mine permit boundary that would occur as a result of the plan to use up to 227,000 gpd from surface water rights for the life of the mine. (MDK)

MP.12.4 Buffer Zones
Comment MK 125. Response accepted. (MDK)

MP.25 Alluvial Valley Floors
Comment MK 126. Response accepted. (MDK)

Reclamation Plan

RP.10 Reestablishment of Essential Hydrologic Functions and Agricultural Utility on Alluvial Valley Floors
Comment MK 127. Response accepted. (MDK)

From: Alan Edwards
To: andrew kuhlmann
Subject: Brook Mine
Date: Monday, December 21, 2015 5:19:36 PM

Thanks for the call. It gives me an idea of what we can work on after the first of the year. Alan

Sent from my iPhone
--

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Alan Edwards
To: Alan Edwards
Cc: Mark Rogaczewski; BJ Kristiansen; Kyle Wendtland
Subject: Re: Concerns regarding Ramaco permit
Date: Wednesday, December 23, 2015 7:33:35 AM

I have talked this over with Andrew and have an idea how to respond. Andrew and I will get together after the first of the year. When we have an idea fleshed out I will set up a call to discuss and get your input.

Have a good holiday.

Alan

Sent from my iPhone

On Dec 18, 2015, at 10:34 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> Thanks Mark. I will look it over and try to get back to everyone next week. Alan
>
> Sent from my iPhone
>
> On Dec 18, 2015, at 10:26 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Alan,
>>
>> Kyle asked me to forward the attached letter from the Powder River Basin Resource Council to you. He has also asked that I respond to Ms. Anderson stating a response will be sent from you as Kyle cannot respond due to a conflict of interest. Please let BJ or I know if you have any questions/concerns.
>>
>> Thanks,
>> Mark
>> ---------- Forwarded message ----------
>> From: **Shannon Anderson** <sanderson@powderriverbasin.org>
>> Date: Tue, Dec 15, 2015 at 3:37 PM
>> Subject: Concerns regarding Ramaco permit
>> To: kyle.wendtland@wyo.gov
>> Cc: Mark Rogaczewski <mark.ROGACZEWSKI@wyo.gov>, Bj Kristiansen <bj.kristiansen@wyo.gov>, andrew kuhlmann <andrew.kuhlmann@wyo.gov>
>>
>> Dear Kyle,

Please see the attached letter regarding the Ramaco coal mine permit. We look forward to your and your staff's response.

Thank you,

Shannon

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

<2015 12-15 ltr to DEQ re Ramaco permit.pdf>

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Muthu Kuchanur
To:	BJ Kristiansen
Subject:	Brook Mine Round 4 Review
Date:	Tuesday, December 29, 2015 8:45:06 AM
Attachments:	MuthuKuchanur_FourthRound Comments_ Brook Mine _TFN 6 2-025.docx

---

Good morning BJ,

Please find attached my review for the records. There are no outstanding comments in my review.

Thanks,
Muthu

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82001

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

TO: Bjarne Kristiansen, LQD District III

CC: TFN 6 2/025

FROM: Muthu Kuchanur, LQD Division Services

DATE: December 29, 2015

SUBJECT: Fourth Round Comments on Brook Mine New Permit Application (TFN 6 2/025)

As requested by your December 10, 2015 memorandum, I have performed a review of the responses to my third round comments.

Appendix D5

Section D5.3.3.2 Overburden and Interburden

1. Response accepted. (MK, Round 3)

Section D5.3.3.3 Coal

2. Response accepted. (MK, Round 3)

Section D5.3.3.3 Coal

3. Response accepted. (MK, Round 3)

4. Response accepted. (MK, Round 2)

Section D5.3 Geology of Mine Area

5. Response accepted. (MK, Round 3)

Addendum D5-3 Geologic Cross Sections

6. Response accepted. (MK, Round 3)

Addendum D5-4 Isopachs

7. Response accepted. (MK, Round 4)

Addendum D5-5 Overburden, Roof and Floor Sample Analysis Table

8. Response accepted. (MK, Round 2)

Appendix D6

Section D6.2.1 Regional Hydrogeology

9. Response accepted. (MK, Round 2)

10. Response accepted. (MK, Round 2)

11. Response accepted. (MK, Round 2)

12. Response accepted. (MK, Round 2)

Section D6.2.2.1 Monitor Well Construction, Completion and Development

13. Response accepted. (MK, Round 2)

14. Response accepted. (MK, Round 2)

Section D6.2.2.2 Aquifer Tests

15. Response accepted. (MK, Round 4)

16. Response accepted. (MK, Round 3)

17. Response accepted. (MK, Round 2)

18. Response accepted. (MK, Round 3)

19. Response accepted. (MK, Round 3)

20. Response accepted. (MK, Round 3)

Section D6.2.2.4 Premining Potentiometric Surface

21. Response accepted. (MK, Round 3)

22. Response accepted. (MK, Round 2)

Section D6.2.2.5 Recharge and Discharge Areas

23. Response accepted. (MK, Round 2)

24. Response accepted. (MK, Round 2)

25. Response accepted. (MK, Round 3)

26. Response accepted. (MK, Round 2)

Section D6.2.3 Baseline Water Quality

27. Response accepted. (MK, Round 2)

28. Response accepted. (MK, Round 2)

Section D6.2.4 Groundwater Rights

29. Response accepted. (MK, Round 3)

30. Response accepted. (MK, Round 3)

31. Response accepted. (MK, Round 3)

<u>Mine Plan</u>

32. Response accepted. (MK, Round 4)

MP.1.1 Type of Mine

33. Response accepted. (MK, Round 2)

34. Response accepted. (MK, Round 2)

MP.5.8 Mine Pit Dewatering Plan

35. Response accepted. (MK, Round 3)

36. Response accepted. (MK, Round 3)

MP.5.9 Dewatering Wells

37. Response accepted. (MK, Round 3)

38. Response accepted. (MK, Round 2)

MP.5.8 Groundwater Rights

39. Response accepted. (MK, Round 2)

MP.6.2.Groundwater

40. Response accepted. (MK, Round 3)

41. Response accepted. (MK, Round 2)

42. Response accepted. (MK, Round 2)

MP.6.3.2 Plan to Mitigate the Impacts on Groundwater

43. Response accepted (MK)

MP.7.2 Groundwater Monitoring

44. Response accepted. (MK, Round 3)

45. Response accepted. (MK, Round 2)

MP.8 Water use

46. Response accepted. (MK, Round 3)

47. Response accepted. (MK, Round 3)

48. Response accepted. (MK, Round 3)

49. Response accepted. (MK, Round 3)

Addendum MP-3 Groundwater Model

50. Response accepted. (MK, Round 3)

51. Response accepted. (MK, Round 3)

52. Response accepted. (MK, Round 3)

53. Response accepted. (MK, Round 2)

54. Response accepted. (MK, Round 2)

55. R Response accepted. (MK, Round 3)

56. Response accepted. (MK, Round 3)

57. Response accepted. (MK, Round 2)

58. Response accepted. (MK, Round 3)

59. Response accepted. (MK, Round 2)

60. Response accepted. (MK, Round 2)

61. Response accepted. (MK, Round 3)

62. Response accepted. (MK, Round 3)

63. Response accepted. (MK, Round 2)

64. Response accepted. (MK, Round 3)

65. Response accepted. (MK, Round 3)

66. Response accepted. (MK, Round 3)

67. Response accepted. (MK, Round 2)

68. Response accepted. (MK, Round 3)

69. Response accepted. (MK, Round 3)

70. Response accepted. (MK, Round 3)

71. Response accepted. (MK, Round 2)

72. Response accepted. (MK, Round 2)

73. Response accepted. (MK, Round 3)

74. Response accepted. (MK, Round 4)

75. Response accepted. (MK, Round 2)

76. Response accepted. (MK, Round 2)

77. Response accepted. (MK, Round 3)

78. Response accepted. (MK, Round 2)

79. Response accepted. (MK, Round 3)

80. Response accepted. (MK, Round 3)

81. Response accepted. (MK, Round 3)

82. Response accepted. (MK, Round 2)

83. Response accepted. (MK, Round 3)

84. Response accepted. (MK, Round 3)

85. Response accepted. (MK, Round 3)

86. Response accepted. (MK, Round 3)

87. Response accepted. (MK, Round 2)

88. Response accepted. (MK, Round 3)

89. Response accepted. (MK, Round 3)

Addendum MP-6 Subsidence Control Plan

90. Response accepted. (MK, Round 2)

<u>Reclamation Plan</u>

RP 8.5.3 Groundwater

91. Response accepted. (MK, Round 2)

92. Response accepted. (MK, Round 2)

93. Response accepted. (MK, Round 2)

94. Response accepted. (MK, Round 2)

95. Response accepted. (MK, Round 2)

96. Response accepted. (MK, Round 2)

97. Response accepted. (MK, Round 3)

From:	Jeff Barron
To:	Matthew Kunze
Subject:	Comment 124
Date:	Tuesday, December 29, 2015 3:25:34 PM
Attachments:	Mine_Plan_Text_Round_3_JGB_response to MK124.pdf Mine_Plan_Text_Round_3_JGB_response to MK124_2.pdf image001.jpg

---

Matt,

Thanks for your time on the phone. Please find attached the revised text for your intial review. This updates section MP.6.1 and MP.8 Let me know if this works or any input you may have.

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

Brook Mine permit area will not likely have any impact on downstream water rights. Water rights for use within the permit boundary will be obtained by utilizing historical active Sheridan Wyoming Coal rights dating before 1950, purchasing water rights from downstream users potentially including those in Montana with excess rights, or obtaining new rights on the Tongue River which will be subject to the Yellowstone Compact. Surface water use is anticipated to continue much as it has before mining with additional water retained within the permit boundary as it is used for dust abatement and pollution control. Section MP.8 discusses the amount of water that may be potentially used for dust abatement. Water may also be temporarily detained in sediment ponds prior to the release of water downstream after effluent criteria are met. Any surface water right that is disturbed or affected by the mining operations of the Brook Mine, shall have that water right replaced with a water source of similar quantity and quality as provided by Wyoming Statute § 35-11-415(b)(xii), until such time that the original surface water right's functionality is restored.

Discussion of the potential mining impacts to the alluvial valley floors (AVFs) within the permit area and adjacent areas is presented in Mine Plan Section MP.25.

MP.6.2 Groundwater

MP.6.2.1 Introduction

Mining activities will affect the groundwater within and outside of the Permit area. The Target Coal seams are predominantly dry in the western portion of the permit area and eastern portions have been affected by CBNG development. Mining will remove portions of the coal aquifer. There will be groundwater inflow into the contour/trench cuts and well as the auger cuts where the aquifers are saturated. Drawdown of the potentiometric surfaces in the aquifers surrounding the contour/trench cuts is expected. The impacts of the drawdown in the coal aquifers and the expected rate of inflows are discussed in Addendum MP-3, which contains the groundwater modeling investigation conducted in 2013-2014, and are summarized in this section. The effects of possible subsidence on groundwater and the hydrologic system are minimal during mining operations as the area where subsidence would be most likely to occur will be dewatered during operation. Once mining operations are completed, any subsidence that occurs would have a minimal, temporary impact on groundwater quality before stabilizing after a number of pore

mines in the Powder River Basin pump between 300 and 920 acre-feet of groundwater per year. If this is assumed to approximate the water usage of typical coal mines, the Brook Mine will be on the lower end of average water usage for coal mines. This value may vary year to year depending on conditions, the mine plan, and other variables. Enough water is available from surface water rights that variations in pit inflows, runoff in sediment or flood control reservoirs, or other sources will easily be supplemented or not taken from the surface water rights see section MP.6.1. Table MP.8-1 provides an estimate of the water used by specific use at the Brook Mine. Table MP.8-1 also provides the expected quantity of water taken from each source.

RAMACO is aware of the Yellowstone River Compact and will act in accordance with the guidelines outlined by obtaining WSEO permits for impoundments.

MP.9 RECLAMATION OF EXPLORATION HOLES AND WELLS

MP.9.1 Developmental Drilling and Plugging Plan

All drilling activities within the permit area (and potential exploration activities) will be conducted according to the following procedures. Typical backfilling procedures for exploration holes or wells are illustrated on Figure MP.9-1. Where procedural differences exist for developmental and exploration drilling, they are discussed separately.

The mine will properly permit each drilling program with WDEQ/LQD and the Bureau of Land Management (BLM) prior to the initiation of the program.

The overburden analytical results from all drilling programs will be presented in the appropriate annual report to WDEQ/LQD. General information on site descriptions, drilling procedures, and reclamation procedures are discussed in the following subsections.

MP.9.2 Drill Site Access and Initial Disturbance

Whenever possible, sites will be accessed over native ground and construction of roads will be avoided, minimizing environmental effects. Similarly, drill pads and mud pits are not generally constructed. If either of these structures are needed, the topsoil will be salvaged from the site prior to construction. If roads are considered necessary, approximately 6 inches of the surface topsoil will be windrowed to the protected side of the roadbed. Roads will not be located on hillsides with greater than 40 percent slopes; roads will not exceed 10 percent; roads will not be constructed near or up a stream channel; any necessary stream crossings will be designed to minimize disturbance; adequately designed culverts and ditches will be installed as needed, and culverts will be covered with a minimum of 12 inches of material.

WWC
ENGINEERING

From:	Matthew Kunze
To:	Jeff Barron
Subject:	Re: Comment 124
Date:	Wednesday, December 30, 2015 8:05:27 AM
Attachments:	image001.jpg

Jeff,

I think what you have inserted in MP.6.1 works but I have some suggested language below to help clarify and also provide reference to Table MP.8-1:

Table MP.8-1 shows the estimated water required for specific uses at the Brook Mine and the water sources. As indicated in Table MP.8-1, surface water rights may supply up to 227,000 gpd, or 69 percent of the mine's water supply needs. Water rights for use within the permit boundary will be obtained by utilizing historical active Sheridan Wyoming Coal rights dating before 1950, purchasing water rights from downstream users potentially including those in Montana with excess rights, or obtaining new rights on the Tongue River which will be subject to the Yellowstone Compact. Surface water use is anticipated to continue much as it has before mining with additional water retained within the permit boundary as it is used for dust abatement and pollution control. Section MP.8 discusses the amount of water that may be potentially used for dust abatement. Water may also be temporarily detained in sediment ponds prior to the release of water downstream after effluent criteria are met.

The Brook Mine will not likely have any impact on downstream water rights. Any surface water right that is disturbed or affected by the mining operations of the Brook Mine, shall have that water right replaced with a water source of similar quantity and quality as provided by Wyoming Statute § 35-11-415(b)(xii), until such time that the original surface water right's functionality is restored.

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Tue, Dec 29, 2015 at 3:25 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> Matt,
>
> Thanks for your time on the phone. Please find attached the revised text for your intial review. This updates section MP.6.1 and MP.8 Let me know if this works or

any input you may have.

Jeff Barron, P.E. | Project Manager

1849 Terra Avenue | Sheridan, WY 82801

Tel 307-672-0761 | Cell 307-751-1427

www.wwcengineering.com

WWC
ENGINEERING

From:	Jeff Barron
To:	Matthew Kunze
Subject:	RE: Comment 124
Date:	Wednesday, December 30, 2015 8:12:14 AM
Attachments:	image001.jpg

Thanks Matt for your input. I will be providing the updated pages today to BJ.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 8:05 AM
To: Jeff Barron
Subject: Re: Comment 124

Jeff,

I think what you have inserted in MP.6.1 works but I have some suggested language below to help clarify and also provide reference to Table MP.8-1:

Table MP.8-1 shows the estimated water required for specific uses at the Brook Mine and the water sources. As indicated in Table MP.8-1, surface water rights may supply up to 227,000 gpd, or 69 percent of the mine's water supply needs. Water rights for use within the permit boundary will be obtained by utilizing historical active Sheridan Wyoming Coal rights dating before 1950, purchasing water rights from downstream users potentially including those in Montana with excess rights, or obtaining new rights on the Tongue River which will be subject to the Yellowstone Compact. Surface water use is anticipated to continue much as it has before mining with additional water retained within the permit boundary as it is used for dust abatement and pollution control. Section MP.8 discusses the amount of water that may be potentially used for dust abatement. Water may also be temporarily detained in sediment ponds prior to the release of water downstream after effluent criteria are met.

The Brook Mine will not likely have any impact on downstream water rights. Any surface water right that is disturbed or affected by the mining operations of the Brook Mine, shall have that water right replaced with a water source of similar quantity and quality as provided by Wyoming Statute § 35-11-415(b)(xii), until such time that the original surface water right's functionality is restored.

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Tue, Dec 29, 2015 at 3:25 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:
Matt,

Thanks for your time on the phone. Please find attached the revised text for your intial

review. This updates section MP.6.1 and MP.8 Let me know if this works or any input you may have.

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From:	Matthew Kunze
To:	Jeff Barron
Subject:	Re: Comment 124
Date:	Wednesday, December 30, 2015 8:13:06 AM
Attachments:	image001.jpg

Ok thanks. I will look out for the updated pages from Bj.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 8:11 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> Thanks Matt for your input. I will be providing the updated pages today to BJ.
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Wednesday, December 30, 2015 8:05 AM
> **To:** Jeff Barron
> **Subject:** Re: Comment 124
>
> Jeff,
>
> I think what you have inserted in MP.6.1 works but I have some suggested language below to help clarify and also provide reference to Table MP.8-1:
>
> Table MP.8-1 shows the estimated water required for specific uses at the Brook Mine and the water sources. As indicated in Table MP.8-1, surface water rights may supply up to 227,000 gpd, or 69 percent of the mine's water supply needs. Water rights for use within the permit boundary will be obtained by utilizing historical active Sheridan Wyoming Coal rights dating before 1950, purchasing water rights from downstream users potentially including those in Montana with excess rights, or obtaining new rights on the Tongue River which will be subject to the Yellowstone Compact. Surface water use is anticipated to continue much as it has before mining with additional water retained within the permit boundary as it is used for dust abatement and pollution control. Section MP.8 discusses the amount of water that may be potentially used for dust

abatement. Water may also be temporarily detained in sediment ponds prior to the release of water downstream after effluent criteria are met.

The Brook Mine will not likely have any impact on downstream water rights. Any surface water right that is disturbed or affected by the mining operations of the Brook Mine, shall have that water right replaced with a water source of similar quantity and quality as provided by Wyoming Statute § 35-11-415(b)(xii), until such time that the original surface water right's functionality is restored.

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

200 West 17th Street, Lower Level

Cheyenne, WY 82002

307-777-7055

On Tue, Dec 29, 2015 at 3:25 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:

Matt,

Thanks for your time on the phone. Please find attached the revised text for your intial review. This updates section MP.6.1 and MP.8 Let me know if this works or any input you may have.

Jeff Barron, P.E. | Project Manager

1849 Terra Avenue | Sheridan, WY 82801

Tel 307-672-0761 | Cell 307-751-1427

www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From: Jeff Barron
To: Matthew Kunze
Subject: RE: Comment 124
Date: Wednesday, December 30, 2015 9:32:30 AM
Attachments: image001.jpg

I have sent the updated text to BJ, to address your comment.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 8:13 AM
To: Jeff Barron
Subject: Re: Comment 124

Ok thanks. I will look out for the updated pages from Bj.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 8:11 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:
Thanks Matt for your input. I will be providing the updated pages today to BJ.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 8:05 AM
To: Jeff Barron
Subject: Re: Comment 124

Jeff,

I think what you have inserted in MP.6.1 works but I have some suggested language below to help clarify and also provide reference to Table MP.8-1:

Table MP.8-1 shows the estimated water required for specific uses at the Brook Mine and the water sources. As indicated in Table MP.8-1, surface water rights may supply up to 227,000 gpd, or 69 percent of the mine's water supply needs. Water rights for use within the permit boundary will be obtained by utilizing historical active Sheridan Wyoming Coal rights dating before 1950, purchasing water rights from downstream users potentially including those in Montana with excess rights, or obtaining new rights on the Tongue River which will be subject to the Yellowstone Compact. Surface water use is anticipated to continue much as it has before mining with additional water retained within the permit boundary as it is used for dust abatement and pollution control. Section MP.8 discusses the amount of water that may be potentially used for dust abatement. Water may also be temporarily detained in sediment ponds prior to the release of water downstream after effluent criteria are met.

The Brook Mine will not likely have any impact on downstream water rights. Any surface water right that is disturbed or affected by the mining operations of the Brook Mine, shall have that water right replaced with a water source of similar quantity and quality as provided by Wyoming Statute § 35-11-415(b)(xii), until such time that the original surface water right's functionality is restored.

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Tue, Dec 29, 2015 at 3:25 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:
Matt,

Thanks for your time on the phone. Please find attached the revised text for your intial review. This updates section MP.6.1 and MP.8 Let me know if this works or any input you may have.

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From:	andrew kuhlmann
To:	BJ Kristiansen
Subject:	Letters from Big Horn Coal"s and Padlock Ranch"s attorneys
Date:	Wednesday, December 30, 2015 10:44:30 AM
Attachments:	2015-12-14 Counsel for Padlock Ranch ltr to AK.pdf 2015-12-16 Counsel for BHC ltr to AK.pdf

---

BJ,

Attached are the two letters I received from the respective counsels of Big Horn Coal Company and Padlock Ranch.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

RECEIVED
DEC 16 2015
WYOMING ATTORNEY GENERAL OFFICE, WNR

LAW OFFICES
LONABAUGH AND RIGGS, LLP
SUITE 110, 50 EAST LOUCKS STREET
DRAWER 5059
SHERIDAN, WYOMING 82801

DAN B. RIGGS
JEFFREY J. GONDA
ROBERT G. BERGER
HAULTAIN E. CORBETT
DAVID C. SMITH*
MISTEE L. ELLIOTT
AMANDA K. ROBERTS**

MOLLY R. HOON-HANKS*
J. KYLE HENDRICKSON

* ADMITTED IN COLORADO
**ADMITTED IN MONTANA

TELEPHONE (307) 672-7444
FAX (307) 672-2230
E-MAIL: Lawyers@Lonabaugh.com

E.E. LONABAUGH
(1861-1938)

A.W. LONABAUGH
(1896-1971)

MICHAEL C. STEEL
(1974-2008)

E. E. LONABAUGH
(1923-2012)

December 14, 2015

Via U.S. Mail and E-mail
andrew.kuhlmann@wyo.gov

Andrew Kuhlmann
Wyoming Attorney General's Office
123 Capital Building
Cheyenne, WY 82002

Re: Padlock Ranch Company
Ramaco / Brook Mining Company
Coal Mine Permit Application
TFN6 2/025
Sheridan County, Wyoming

Dear Andrew:

As we discussed on the telephone, this office represents Padlock Ranch Company ("Padlock") which owns approximately 1,400 acres of land within the Phase I mine permit area for the coal mine proposed by Ramaco and Brook Mining Company, LLC ("Ramaco").

At our client's request, we have been following the mine permit application process, to the extent we can do so based on the extremely limited information provided to Padlock by Ramaco.

However, because Round 3 of the Wyoming Department of Environmental Quality's review and comments reviewed by us makes no mention of the fact that Padlock has not provided surface owner consent to mining as required by the Wyoming Environmental Quality Act, we thought it appropriate to offer you Padlock's view of the current situation.

Accordingly, please note the following:

- Padlock owns approximately 1,400 acres of deeded land within the mining permit area for Phase I of the Ramaco Mine. Although some of the maps provided to the DEQ by Ramaco erroneously show these lands as being owned by Ramaco, and Ramaco has subsequently claimed in comments to DEQ that Padlock is not a surface owner, Ramaco is incorrect; the lands are owned in fee by Padlock, subject to a mineral reservation currently held by Ramaco.

- Padlock was first provided with maps of Ramaco's proposed mine permit area in late 2012. At that time Ramaco provided Padlock with a proposed Surface Access Agreement covering over 6,000 acres of Padlock land. Ramaco asked for Padlock's surface owner consent to mining. Padlock declined because it had not seen a mine plan or a reclamation plan.

- In the spring of 2013, Ramaco provided Padlock with several binders containing draft mining and reclamation plans. Those plans were different from the maps provided to Padlock in late 2012.

- During the summer of 2013, Ramaco went ahead with surveying and core drilling on Padlock's lands without first obtaining Padlock's consent and without compensating Padlock therefor.

- In August 2014, Ramaco provided Padlock with a new set of maps showing a different mine plan. Since then, it is Padlock's understanding that the permit area and mine plan have been extensively revised.

- In September, 2014, Padlock tendered a revised form of Surface Access Agreement to Ramaco. Unlike the form of agreement proposed by Ramaco, Padlock's draft agreement would have provided economic compensation to Padlock to cover losses of grazing land and a breach of Padlock's water system. It was proposed to Ramaco that annual payments would be 100% recoupable from the coal royalty they initially proposed. In an attempt to negotiate, Padlock representatives later verbally stated that Padlock would consider delaying any payment until the time mine disturbance commenced.

Thereafter, Ramaco consistently and continuously refused to negotiate any of the terms of the Surface Access Agreement with Padlock.

- An updated mine area and haul road map was shown to Padlock in February 2015, but Ramaco was unwilling to provide a copy of the map to Padlock. Ramaco has not kept Padlock updated on its changes to the mine plan.

- The Padlock lands include a buried waterline system which provides water to Padlock's livestock. Ramaco's engineer was advised of the location of this stock water system in March, 2015. Padlock advised that Ramaco's proposed mining operations would interfere with the waterline. Since then, Padlock has received nothing from Ramaco with respect to protecting or replacing this stock water system as required by W.S. §35-11-415 (b)(xii).

- To date, Ramaco has failed to protect the interests of Padlock, as surface owner, and it has not provided or offered to provide a bond to secure the payment for any damages to the surface estate as required by W.S. §35-11-416(a).

- To date, Ramaco has not provided Padlock with a current mine plan or a current reclamation plan as required by W.S. §35-11-406 (b)(xi) or (xii).

- To date, Padlock has not granted surface owner consent to mining as required by W.S. §35-11-406(b)(xi) or (xii).

We are aware that Ramaco has taken the position that it is not required to obtain surface owner consent to mining from Padlock which is mandated by the Wyoming Environmental Quality Act because of a mineral reservation contained in a 1954 deed to Padlock's predecessor in title. Ramaco cites the case of *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986), for this position. Ramaco's reliance on *WYMO Fuels* case is misplaced. In that case, two surface owners whose lands had been condemned for a haul road and a railroad spur claimed that they were surface owners from whom surface owner consent to mining was required, notwithstanding the fact that all of their surface rights

within the mine permit area had been condemned by the mining company. The Supreme Court held that the two parties whose lands had been condemned were not surface owners after the condemnation judgment and "were left with no interest which required protection pursuant to the Wyoming Environmental Quality Act." *Id.* at 1236. The situation here is completely different; Padlock is the fee owner of 1,400 acres of surface estate which has not been condemned and which is therefore entitled to protection to the Wyoming Environmental Quality Act.

Padlock, as owner of surface estate, is clearly a "surface owner" within the meaning of the Environmental Quality Act because if owns fee title to the surface of the lands in question. *Belle Fourche Pipeline Co. v. State*, 766 P.2d 537, 543 (Wyo. 1988).

Wyoming statute §35-11-406(b)(xi) and (xii) both require an "instrument of consent" from the surface owner that grants the applicant permission to enter and commence surface mining operations and that includes approval of the applicant's mining plan and reclamation plan. The mineral reservation in the 1954 deed provides neither surface owner consent to mining as contemplated by the Wyoming Environmental Quality Act, nor approval of a mining plan or a reclamation plan.

The 1954 deed relied upon by Ramaco is an instrument of conveyance, because it conveyed fee title to the surface of lands now owned by Padlock (and by Big Horn Coal Company). It is notable that the federal counterpart to Wyoming's Environmental Quality Act, the Surface Mining Control and Reclamation Act of 1977 ("SMCRA") expressly included a "conveyance" as a type of document that may provide for surface owner consent, *see*; 30 U.S.C. 1260(b)(6)(B); *Belle Fourche Pipeline Company v. State*, *supra* at 548. However, Wyoming's Environmental Quality Act does not include a "conveyance" as a specific type of "instrument of consent". This omission must be considered an intentional act by the legislature, and courts will not read words into a statute when the legislature has chosen not to include them. *Morris v. CMS Oil and Gas Co.*, 227 P.2d 325, 333 (Wyo. 2010). Under Wyoming law, an instrument of conveyance cannot be considered an instrument of consent to mining.

Further, Ramaco's mining plans and reclamation plans were developed almost 60 years after the execution of the 1954 deed. There is no conceivable way that the reservation in the 1954 deed can be construed as approval of Ramaco's mining plan or reclamation plan.

The Wyoming Supreme Court has recognized the need for liberal construction of environmental statutes; "Environmental protection statutes have as their goal public protection; they are entitled to a liberal construction. When faced with claims under the Environmental Quality Act, courts of this state must all times be ready and willing to afford such remedies as are within the law." *People v. Platte Pipe Line Company*, 649 P.2d 208, 212 (Wyo. 1982) (Internal citations omitted).

At the time the 1954 deed was executed, common law provided virtually no protection for surface owners. The mineral estate was wholly dominant over the surface estate - no damages were payable as long as the mineral owner's use of the surface was reasonable and the mineral owner did not operate negligently or engage in willful misconduct. *Belle Fourche Pipeline Company v. State*, *supra* at 544. There were no state or federal laws requiring reclamation of coal mines in 1954, nor were mining companies in the practice of voluntarily reclaiming their land. During the 1960s and 70s, however, state and federal governments responded to increase surface mining by enacting new laws to protect both the environment and surface owners. *Id.* The movement towards new legislation was based largely on the fact that mining companies had failed to reclaim or restore the surface after extracting minerals, leaving "once productive agricultural and grazing lands ...destroyed by mining activities." *Id.* 546. Wyoming enacted its Environmental Quality Act in 1973, and amended the Act in 1975. The Act provides specific protection and consent requirements for surface owners.

The 1954 deed predated the Wyoming Environmental Quality Act by 20 years. Allowing that deed to serve as consent to mining and reclamation under the Wyoming Environmental Quality Act would be contrary to the legislature's goal to protect surface owners as imposed by the Wyoming Environmental Quality Act. *See, Universal Equipment Company v. State*, 839 P.2d 967, 973 (Wyo. 1972) (imposing post-Environmental Quality Act bond requirements on pre-existing operations was appropriate in order to ensure reclamation of the mine lands).

Ramaco's argument that the reservation in the 1954 deed obviates the need for Ramaco to obtain surface owner consent to mining and approval of Ramaco's mine plan and reclamation plan from Padlock has no merit.

Thank you for your attention to this matter, and please keep this office advised as to developments in this matter, and thanks.

Very truly yours,

LONABAUGH AND RIGGS, LLP

By: Haultain E. Corbett

HEC/rlb
cc: Padlock Ranch Company

RECEIVED
DEC 17 2015
WYOMING ATTORNEY
GENERAL OFFICE, WNR

CROWLEY | FLECK PLLP
ATTORNEYS

Lynne Boomgaarden
237 Storey Boulevard, Ste. 110
Cheyenne, WY 82009
Office: 307-426-4100
Direct: 307-426-4104
Cell: 307-631-1070
lboomgaarden@crowleyfleck.com

December 16, 2015

Mr. Andrew Kuhlman
Senior Assistant Attorney General
Kendrick Building
2320 Capitol Avenue
Cheyenne, WY 82002
andrew.kuhlmann@wyo.gov

Via Electronic and U.S. Mail

Re: Continued Concerns Regarding Lack of Surface Owner Consent and other Representations Related to the Brook Mining Mine Permit Application

Dear Mr. Kuhlmann:

As you are aware from prior communications, my client, Big Horn Coal Company ("BHC"), did not consent to the mine plan and reclamation plan that Brook Mining/Ramaco (collectively, "Ramaco") provided to BHC for review because the proposed activities will unreasonably interfere with BHC's extensive surface infrastructure improvements and its existing use and development plans for the area, including but not limited to the exercise of BHC's rights and obligations under its ***existing*** Mine Permit No. 213-T8. BHC documented its legal and operational concerns with the Ramaco mine plan, reclamation plan, permit application adjudication and exploratory drilling activity in a letter dated March 6, 2015, to Mr. Alan Edwards and copied to you.

BHC recently became aware of certain assertions made by Ramaco to the Wyoming Attorney General and the Department of Environmental Quality Land Quality Division ("DEQ/LQD") in a letter to you from Mr. Tom Sansonetti dated October 13, 2015, and in Ramaco's Round 2 permit review responses.

Accordingly, today's letter is being provided for the purpose of reaffirming BHC's concerns and position regarding the necessity of obtaining the surface owner's consent to mining as required by the Wyoming Environmental Quality Act ("WEQA").

First, notwithstanding Mr. Sansonetti's assertion on behalf of Ramaco that "[t]he 1983 release agreement does not affect any of the rights reserved in the 1954 Deed," and "[t]he 1954 Deed controls the surface use mining rights of Ramaco relative to both Big Horn Coal and Padlock Ranch," the Wyoming district court denied Ramaco's and BHC's competing motions for summary judgment as to those assertions by an order dated September 21, 2015. This matter remains the subject of active litigation before the Fourth Judicial District Court for Sheridan County, Wyoming, in *Brook Mining Company, LLC v. Big Horn Coal Company,* Civil Action No. CV 2014-372. As of this date, no formal discovery plans have been made and no trial date has been set. BHC continues to ardently dispute Ramaco's assertion that it has the right under the 1954 deed to use BHC's surface lands to conduct all "necessary or convenient" coal mining activities and that the Ramaco Mine Plan application contains permitted uses of the surface under the 1954 Deed.

Second, as outlined in our March 6, 2015 letter to Mr. Edwards, BHC's surface owner rights under W.S. 35-11-406(b)(xii) are independent of any interpretation or operation of the 1954 deed because ***nothing*** in the WEQA permits a mine permit applicant to utilize a deed, with a general reservation of surface rights, to strip a surface owner under W.S. 35-11-406(b)(xii) of its rights to *review* a compliant mine and reclamation plan and to *refuse to consent* to such plan, or to *exempt* a mine permit applicant from its obligation to petition the Environmental Quality Council ("EQC") and provide sufficient evidence upon which the EQC can make the findings necessary under W.S. 35-11-406(b)(xii)(A)-(E) to support an order in lieu of consent. Ramaco erroneously relies on *WYMO Fuels, Inc. v. Edwards*, 723 P.2d 1230 (Wyo. 1986) to dispute this fact (see Adjudication, Response AG 1-Round 1). The Supreme Court in *WYMO Fuels* addressed the narrow issue of "whether condemnation of a way of necessity for a railroad spur track and a mine truck haul road … dispenses with the statutory requirement that a resident or agricultural landowner or a surface landowner consent to mining operations." *Id.* at 1231. In answer to this narrow question, the Supreme Court "afford[ed] efficacy to the condemnation statute," by holding that two parties whose lands had been condemned were no longer surface owners and accordingly, "were left with no interest which required protection pursuant to the Wyoming Environmental Quality Act." *Id.* at 1236. The *WYMO Fuels* decision has no application here. BHC's fee surface interests have not been condemned and neither Ramaco nor DEQ/LQD may ignore BHC's surface consent rights under the WEQA.

For these reasons, BHC respectfully renews its request that DEQ/LQD expressly acknowledge BHC's right, pursuant to W.S. 35-11-406(b)(xii), to review and consent to any mine plan and reclamation plan that Ramaco submits to DEQ/LQD for consideration. Absent BHC's consent to a compliant mining plan and reclamation plan, BHC requests that DEQ/LQD require Ramaco to petition to the EQC for an order in lieu of consent.

Finally, Ramaco has failed to provide BHC (either directly or through its court filings) any mine and reclamation plans it has submitted to DEQ/LQD for review. To the best of BHC's knowledge, Ramaco still has not outlined the respective operations of Ramaco and BHC within the overlapping permit area. Moreover, Ramaco's mine plans as represented to the court appear to differ substantially from its filings with DEQ/LQD. As previously stated, these varied representations of Ramaco's plans stand in direct contrast to the cooperation and agreement contemplated by DEQ/LQD SOP 2.1 and undermine any credible foundation upon which Ramaco's permit application might succeed.

Thank you for your consideration of BHC's concerns. Please contact me if you have questions or would like to discuss this matter further.

Sincerely,

Lynne Boomgaarden

Lynne Boomgaarden
Crowley Fleck, PLLP

From: Matthew Kunze
To: Muthu Kuchanur
Subject: Brook Mine CHIA - Groundwater Rights Map
Date: Wednesday, December 30, 2015 11:07:15 AM

Muthu,

I was able to add a surface water rights map for the CHIA by querying the SEO database by Township/Range and then exporting to excel. I did not realize this before, but there is a lat/long for most water rights in the SEO database. So it seems I should be able to add a similar map for surface water rights as we do for groundwater rights.

Also, assuming that the "evaluation area" for groundwater will be the same as surface water, I also made a map for the groundwater rights. This is now Figure 38 and is inserted in Section 4.2.1. I was originally going to see if we could put both surface and groundwater rights on one map but it would be too busy.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

From:	BJ Kristiansen
To:	matthew.kunze@wyo.gov
Subject:	FW: TFN 6 2/025 Round 3 Comments Addenda
Date:	Wednesday, December 30, 2015 11:20:32 AM
Attachments:	response to matt comment 124.docx image003.jpg

Matt,

Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.

-bj

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 9:29 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.6.1 has been added to section MP.8.

MK124

MP.8 Water Use
5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

The appropriate SEO permits will be obtained for the wells included in any dewatering program initiated by the mine.

MP.6 PROBABLE HYDROLOGIC IMPACTS

MP.6.1 Surface Water

The impacts to surface water at the Brook Mine will be considerably less than those of a conventional surface, or strip, mine in the Powder River Basin. As previously discussed, the highwall mining operation will open trenches from which the highwall continuous miner will extract coal from underneath the undisturbed overburden. Therefore, this method of mining leaves a majority of the surface undisturbed. With a majority of the surface undisturbed, runoff characteristics, infiltration, sediment yield and geomorphology will remain unchanged in most of the watershed. However, some temporary surface water impacts will likely occur in response to the trenches and the limited areas of surface mining, as can be seen on Exhibit MP.1-1. During any case in which sediment transport is expected, the Universal Soil Loss Equation (USLE) (Wischmeier & Smith, 1978) will be used to quantify sediment yield. Table MP.6-1 tabulates the estimated soil erodibility (K) factors for each soil type presented in Appendix D7 for the Brook Mine Permit Area. The following text discusses the potential impacts to surface water from the operations at the Brook Mine, and the manner in which these impacts will be mitigated. Exhibit MP.5-1 shows the hydrologic control plan.

As seen on Exhibit MP.1-1, the first trench (TR-1) will be mined in Sections 15 and 22, T57N, R84W near the confluence of Goose Creek and the Tongue River. In addition, facilities level disturbance will also occur throughout this area. This trench will be located in surface that drains both to Goose Creek and the Tongue River. It will have no impact on the channel geomorphology of either Goose Creek or the Tongue River. Minor surface disturbance will occur, and little runoff will enter the trench since the trench is oriented near the upper divide of minor drainage areas. However, the Big Horn No. 2 Reservoir (SEO Permits P9257R and P10952R) and Big Horn No. 14 Reservoir (SEO Permit P8478R) will be disturbed by facility disturbance. These will be reclaimed as specified in the Reclamation Plan.

Three trenches (TR-2, TR-3A, and TR-3B) will be mined in the second and third years along Hidden Water Creek. The trenches will be oriented parallel to the flow in Sections 9 and 15, T57N, R84W. Streamflow from Hidden Water

Creek will be controlled to avoid contact with the trench mines as much as possible through the use of a diversion ditch. This diversion ditch will be designed as discussed in Section 5.4. This ditch will maintain flow, and will minimize impacts to the geomorphology of Hidden Water Creek. Any surface runoff to come in contact with mining disturbance will be treated in the pits or retained in sedimentation control structures in the vicinity of Hidden Water Creek to meet water quality standards before being discharged from the Permit Area. The appropriate WDEQ/WQD discharge permits will be obtained prior to the discharge of any water.

In the fourth and fifth years, mining occurs east of the Slater Creek watershed and west of the Hidden Water Creek watershed. Mining will occur primarily in minor drainages of the Tongue River in Sections 8, 17, and 18, T57N, R84W, as seen on Exhibit MP.1-1. Trench cuts (trenches TR-4 and TR-5) will primarily be oriented perpendicular to the flow path of the minor Tongue River drainages. The trenches will capture runoff in these ephemeral drainages. Due to the short life span of trench's (<3 yrs) peak flow rate from 10-yr, 24-hr precipitation events will be used when designing the pit drainage plan. Though flow to the Tongue River from precipitation events and snowmelt could be reduced slightly, the change will be minimal due to the ephemeral nature of the drainages and the short period of time that the trenches will be open. The trenches will be located near the upper reaches of the minor drainages. Therefore, the majority of the minor drainages in this area will remain unaffected by mining activities. As previously discussed, any runoff coming into contact with mining activities will be captured in a sedimentation impoundment or ASCM to meet water quality standards prior to discharge from the Permit Area. The appropriate WDEQ/WQD discharge permits will be obtained prior to the discharge of any water. Minimal, if any, changes will be made to infiltration in this area. Ground cover will only be altered in the area of the trench. The geomorphology of these ephemeral channels will not be altered significantly. The open trench will be promptly backfilled behind the ongoing highwall mining activities.

In the sixth through tenth years, surface disturbance will primarily occur in the Slater Creek drainage, as shown on Exhibit MP.1-1. One trench (TR-6) will be oriented parallel to Slater Creek's flow in Section 18, T57N, R84W. This trench will capture some runoff from minor tributaries of Slater Creek, which will tend to attenuate flows to Slater Creek and reduce the total runoff volume.

To the west of Slater Creek, a surface mine (SM-1) will target the Monarch Seam in Section 13, T57N, R85W. A trench (TR-7) will also be in close association with the surface mine. Both will be near the top of a hill near a drainage divide and will have little impact on the hydrologic balance other than water which is captured directly during precipitation events. Another trench (TR-8) will be oriented parallel to Slater Creek's flow nearer the channel bottom in Sections 11, 12, and 13, T57N, R85W, but still outside of the Slater Creek channel. This will only obstruct a moderate amount of runoff in the Slater Creek drainage. Slater Creek will still flow naturally around all of the trenches. Measures will be taken to ensure that the trench is protected from storm event flows in the Slater Creek channel. During mining, runoff from the undisturbed portions of the Slater Creek watershed will be diverted from mining activities as much as possible to avoid contamination. Sedimentation impoundments will capture runoff that has come in contact with mining activities, and will treat the water to meet water quality standards before discharge. The appropriate WDEQ/WQD discharge permits will be obtained prior to the discharge of any water. The surface disturbance activities adjacent to the Slater Creek channel will have temporary impacts on the Slater Creek drainage including temporary loss of ground cover and a slight increase in soil erodibility. However, these impacts will not be in the Slater Creek channel itself, and the bed and banks will remain undisturbed. The temporary increase in soil erodibility and loss of ground cover in disturbed locations will be controlled with ASCMs and other sediment and runoff control measures to prevent sediment transport to Slater Creek. The only anticipated direct disturbance to the Slater Creek channel is in Section 13, T57N, R85W, where the channel will be redirected to flow through a culvert under a proposed haul road. However, these changes will be temporary. A 100 foot buffer boundary of the Slater Creek channel will be marked in the field at select locations prior to commencing mining related disturbance. Those areas within the Slater Creek channel and watershed affected by surface mining activities will be restored according to the Reclamation Plan. Because Slater Creek's flow will not come into contact with surface or highwall mining activities, no impact will be made to water quality. The existing Permanent Impoundment # 1 Reservoir (SEO Permit P12986R and Certificate Record CRCR22074) and Legerski #1 Stock Reservoir (SEO Permit P6850S) will be impacted by mining activities during this time period. These impoundments will be reclaimed as detailed in the Reclamation Plan.

As seen on Exhibit MP.1-1, mining activities at the Brook Mine will conclude in the western portion of the Permit Area with highwall mining trenches. These trenches (TR-9A, TR-9B, TR-10, TR-11, and TR-12) will be oriented parallel to and along the channel of an ephemeral drainage that empties directly into the Tongue River. This minor drainage basin is designated "TRD5" on Exhibit D6-2 of Appendix D6. Due to the relatively small area of trench open at any one time, surface water impacts will be minimal. Surface water runoff from undisturbed lands will either be diverted before entering the trench, or will be allowed to enter the trench and will be treated in the trench. Waters that don't enter disturbed lands will continue draining to the Tongue River. Because these waters will not enter the trench or other disturbed lands associated with mining, the sediment yield and chemical make-up will be nearly identical to that before mining. The infiltration rate throughout the majority of the watershed will remain unchanged because most topsoil and overburden will remain undisturbed throughout mining operations. Through runoff being diverted to avoid disturbed areas, or by small quantities of runoff being allowed to enter the trench, the peak flow and storm volume will tend to be slightly reduced or remain nearly identical to that modeled in Appendix D6. Any runoff that does enter disturbed areas will be captured in a sedimentation pond or treated in the trenches to meet water quality requirements before being discharged from the Permit Area. The appropriate WDEQ/WQD discharge permits will be obtained prior to the discharge of any water. The existing Upper 10 Stock Reservoir (SEO Permit P8206S) and Welch #4 Stock Reservoir (SEO Permit P8133S) will be impacted by surface mining during this phase. At the conclusion of mining operations they will be reclaimed as detailed in the Reclamation Plan.

As described above, the Brook Mine is expected to have an extremely small effect on surface water quality in the Tongue River and other major streams adjacent to the permit boundary of the Brook Mine. As such, no effect on the designated uses present on major streams adjacent to the permit boundary is expected. There is no anticipated impact to water rights downstream of the permit boundary either. The implementation of ASCMs and sediment impoundments as discussed in Section MP.6.3 will be an important part of minimizing any possible impacts to surface water quality in the surrounding area that the Brook Mine may have. Additionally, the minimal reduction of any surface water runoff in the upper reaches of drainages in the

Brook Mine permit area will not likely have any impact on downstream water rights. Table MP.8-1 shows the estimated water required for specific uses at the Brook Mine and the water sources. As indicated in Table MP.8-1, surface water rights may supply up to 227,000 gpd, or 69 percent of the mines water supply needs. Water rights for use within the permit boundary will be obtained by utilizing historical active Sheridan Wyoming Coal rights dating before 1950, purchasing water rights from downstream users potentially including those in Montana with excess rights, or obtaining new rights on the Tongue River which will be subject to the Yellowstone Compact. Surface water use is anticipated to continue much as it has before mining with additional water retained within the permit boundary as it is used for dust abatement and pollution control. Section MP.8 discusses the amount of water that may be potentially used for dust abatement. Water may also be temporarily detained in sediment ponds prior to the release of water downstream after effluent criteria are met. Any surface water right that is disturbed or affected by the mining operations of the Brook Mine, shall have that water right replaced with a water source of similar quantity and quality as provided by Wyoming Statute § 35-11-415(b)(xii), until such time that the original surface water right's functionality is restored.

Discussion of the potential mining impacts to the alluvial valley floors (AVFs) within the permit area and adjacent areas is presented in Mine Plan Section MP.25.

MP.6.2 Groundwater

MP.6.2.1 Introduction

Mining activities will affect the groundwater within and outside of the Permit area. The Target Coal seams are predominantly dry in the western portion of the permit area and eastern portions have been affected by CBNG development. Mining will remove portions of the coal aquifer. There will be groundwater inflow into the contour/trench cuts and well as the auger cuts where the aquifers are saturated. Drawdown of the potentiometric surfaces in

MP.8 WATER USE

Water to be used at the Brook Mine will be supplied from various sources. Reverse osmosis units, trucking water, or other sources will be the source of potable water. Industrial water will be obtained from pit inflows, surface water rights, water collected in sediment and flood control reservoirs, or others sources. Water obtained will be used under appropriate permits from the State Engineers Office.

Water used in the Brook Mine facilities will include potable water and industrial water. The potable water will be produced from trucking water, reverse osmosis, or from other sources on an as needed basis at points of use.

Industrial water will be used for dust suppression on the haul roads, truck wash down, wash down of the facilities, and for the highwall miner. This water will be supplied from surface water rights and from water which is collected in the pit and sediment and flood control reservoirs.

It is estimated that the total water use will be approximately 120 million gallons per year (approximately 328,200 gallons per day) with an expected variability of plus or minus 20 percent. This equates to approximately 368 acre-feet of water per year. According to the *Task 1B Report for the Powder River Basin Coal Review Current Water Resources Conditions* (AECOM Environment, May 2014) submitted to the Bureau of Land Management, most mines in the Powder River Basin pump between 300 and 920 acre-feet of groundwater per year. If this is assumed to approximate the water usage of typical coal mines, the Brook Mine will be on the lower end of average water usage for coal mines. This value may vary year to year depending on conditions, the mine plan, and other variables. Enough water is available from surface water rights that variations in pit inflows, runoff in sediment or flood control reservoirs, or other sources will easily be supplemented or not taken from the surface water rights see section MP.6.1. Table MP.8-1 provides an estimate of the water used by specific use at the Brook

Mine. Table MP.8-1 also provides the expected quantity of water taken from each source.

RAMACO is aware of the Yellowstone River Compact and will act in accordance with the guidelines outlined by obtaining WSEO permits for impoundments.

MP.9 RECLAMATION OF EXPLORATION HOLES AND WELLS

MP.9.1 Developmental Drilling and Plugging Plan

All drilling activities within the permit area (and potential exploration activities) will be conducted according to the following procedures. Typical backfilling procedures for exploration holes or wells are illustrated on Figure MP.9-1. Where procedural differences exist for developmental and exploration drilling, they are discussed separately.

The mine will properly permit each drilling program with WDEQ/LQD and the Bureau of Land Management (BLM) prior to the initiation of the program.

The overburden analytical results from all drilling programs will be presented in the appropriate annual report to WDEQ/LQD. General information on site descriptions, drilling procedures, and reclamation procedures are discussed in the following subsections.

MP.9.2 Drill Site Access and Initial Disturbance

Whenever possible, sites will be accessed over native ground and construction of roads will be avoided, minimizing environmental effects. Similarly, drill pads and mud pits are not generally constructed. If either of these structures are needed, the topsoil will be salvaged from the site prior to construction. If roads are considered necessary, approximately 6 inches of the surface topsoil will be windrowed to the protected side of the roadbed. Roads will not be located on hillsides with greater than 40 percent slopes; roads will not exceed 10 percent; roads will not be constructed near or up a stream channel; any necessary stream crossings will be designed to minimize

WWC
ENGINEERING

From:	Matthew Kunze
To:	BJ Kristiansen
Subject:	Re: FW: TFN 6 2/025 Round 3 Comments Addenda
Date:	Wednesday, December 30, 2015 11:26:49 AM
Attachments:	image003.jpg

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** TFN 6 2/025 Round 3 Comments Addenda
>
> BJ,
>
> Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a

reference to section MP.6.1 has been added to section MP.8.

MK124

MP.8 Water Use

5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager

1849 Terra Avenue | Sheridan, WY 82801

Tel 307-672-0761 | Cell 307-751-1427

www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From:	BJ Kristiansen
To:	Matthew Kunze
Subject:	RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date:	Wednesday, December 30, 2015 11:36:49 AM
Attachments:	image001.jpg

Thanks so much Matt, you made my day. Heck, you made my year…what's left of it.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** TFN 6 2/025 Round 3 Comments Addenda
>
> BJ,

Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.8.

MK124

MP.8 Water Use
5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From: BJ Kristiansen
To: jbarron@wwcengineering.com
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda
Date: Wednesday, December 30, 2015 12:44:12 PM
Attachments: image003.jpg

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM

To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.6.1 has been added to section MP.8.

MK124

MP.8 Water Use
5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From: Jeff Barron
To: BJ Kristiansen
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date: Wednesday, December 30, 2015 1:05:41 PM
Attachments: image001.jpg

Thanks BJ

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 12:47 PM
To: Jeff Barron
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final

document package.

-bj

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 9:29 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.8.

MK124

MP.8 Water Use
5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From: Jeff Barron
To: BJ Kristiansen
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date: Wednesday, December 30, 2015 1:07:08 PM
Attachments: image001.jpg

BJ,

Is there any action on my part necessary for the bond?

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 12:47 PM
To: Jeff Barron
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the

pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.

-bj

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 9:29 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.8.

MK124

MP.8 Water Use
5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From: BJ Kristiansen
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date: Wednesday, December 30, 2015 1:25:56 PM
Attachments: image001.jpg

Did you provide a new bond estimate package based on the recent changes to the beginning of mine life? We were going to go along with the old one but that was before you changed the first year plan to be more like Young's Creek. We need your bond estimate to begin our final number generation.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:07 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Is there any action on my part necessary for the bond?

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 12:47 PM
To: Jeff Barron
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** TFN 6 2/025 Round 3 Comments Addenda
>
> BJ,
>
> Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.6.1 has been added to section MP.8.
>
> MK124
>
> MP.8 Water Use
> 5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)
>
> Response: Text has been updated as requested (see attached .doc)
>
> **Jeff Barron, P.E. | Project Manager**
> 1849 Terra Avenue | Sheridan, WY 82801
> Tel 307-672-0761 | Cell 307-751-1427
> www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From:	Jeff Barron
To:	BJ Kristiansen
Subject:	RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date:	Wednesday, December 30, 2015 1:30:06 PM
Attachments:	image001.jpg

It was in a separate binder in that package. I can email the electronic version if necessary.

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 1:29 PM
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

Did you provide a new bond estimate package based on the recent changes to the beginning of mine life? We were going to go along with the old one but that was before you changed the first year plan to be more like Young's Creek. We need your bond estimate to begin our final number generation.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:07 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Is there any action on my part necessary for the bond?

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 12:47 PM
To: Jeff Barron
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** TFN 6 2/025 Round 3 Comments Addenda
>
> BJ,
>
> Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.6.1 has been added to section MP.8.
>
> MK124
>
> MP.8 Water Use
> 5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)
>
> Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From:	Jeff Barron
To:	BJ Kristiansen
Subject:	RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date:	Wednesday, December 30, 2015 1:38:22 PM
Attachments:	image001.jpg

Is it possible both copies we provided were sent to Cheyenne?

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 1:29 PM
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

Did you provide a new bond estimate package based on the recent changes to the beginning of mine life? We were going to go along with the old one but that was before you changed the first year plan to be more like Young's Creek. We need your bond estimate to begin our final number generation.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:07 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Is there any action on my part necessary for the bond?

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 12:47 PM
To: Jeff Barron
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** TFN 6 2/025 Round 3 Comments Addenda
>
> BJ,
>
> Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.6.1 has been added to section MP.8.
>
> MK124
>
> MP.8 Water Use
> 5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)
>
> Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From: BJ Kristiansen
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date: Wednesday, December 30, 2015 1:44:56 PM
Attachments: image001.jpg

Please email it and I'll jump to it right away.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:30 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

It was in a separate binder in that package. I can email the electronic version if necessary.

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 1:29 PM
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

Did you provide a new bond estimate package based on the recent changes to the beginning of mine life? We were going to go along with the old one but that was before you changed the first year plan to be more like Young's Creek. We need your bond estimate to begin our final number generation.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:07 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Is there any action on my part necessary for the bond?

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 12:47 PM
To: Jeff Barron
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** TFN 6 2/025 Round 3 Comments Addenda
>
> BJ,
>
> Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.6.1 has been added to section MP.8.
>
> MK124
>
> MP.8 Water Use
> 5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide

227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From:	Jeff Barron
To:	BJ Kristiansen
Subject:	RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date:	Wednesday, December 30, 2015 1:47:14 PM
Attachments:	Brook Mine 2015 Annual Report Bond.pdf image001.jpg

---

BJ,

Please find attached the requested electronic version of the Bond provided under cover dated December 8th, 2015.

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 1:48 PM
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

Please email it and I'll jump to it right away.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:30 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

It was in a separate binder in that package. I can email the electronic version if necessary.

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 1:29 PM
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

Did you provide a new bond estimate package based on the recent changes to the beginning of mine life? We were going to go along with the old one but that was before you changed the first year plan to be more like Young's Creek. We need your bond estimate to begin our final number generation.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:07 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Is there any action on my part necessary for the bond?

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 12:47 PM
To: Jeff Barron
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** TFN 6 2/025 Round 3 Comments Addenda

BJ,

Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.8.

MK124

MP.8 Water Use
5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

Brook Mine 2015 Bond

Prepared by:

WWC Engineering

December 2015

TABLE OF CONTENTS

A. Summary 1
B. Bond Calculation 1
C. Area Bond 1
D. Incremental Bond 2
E. Miscellaneous Contingency Items 3
F. Total Bond Estimate 3

LIST OF TABLES

Table 1. Reclamation Bond Summary through the end of Year 0 ..... T1
Table 2. Area Bond Estimate T2
Table 3. Overburden Redistribution T3
Table 4. Demolition T4
Table 5. Environmental Monitoring Reclamation Costs T5
Table 6. Scarification Estimate T7
Table 7. Topsoil Estimate T8
Table 8. Revegetation Estimate T9
Table 9. Miscellaneous Contingency Items T10

LIST OF EXHIBITS

Exhibit 1 2015 Bond Topsoil Redistribution Areas

A. Summary

The following summarizes the reclamation performance bond cost estimate for RAMACO's Brook Mine. This bond estimate was established in accordance with Wyoming Department of Environmental Quality/Land Quality Division (WDEQ/LQD) Guideline 12 and includes all activities necessary for complete reclamation of the Brook Mine after the first year of mine production (year 0). This submittal includes all activities necessary for:

- Reclamation of all disturbed lands,
- Environmental monitoring,
- Project management and miscellaneous costs, and
- Labor and equipment overhead and contractor profit.

The submittal presented herein employs assumptions that are based on best professional judgment given the data currently available. The total bond estimate puts the costs to perform the required work by an independent contractor at **$353,144** during which the Brook Mine would be reclaimed to a condition agreed upon by WDEQ/LQD that would take the site to its approved postmining land uses.

B. Bond Calculation

A summary of the reclamation bond is provided in **Table 1**. Reclamation activities included in this summary include area bond, incremental bond and other miscellaneous items associated with surface coal mine bond estimates.

C. Area Bond

It is anticipated that at the end of year 0 of mining only preliminary topsoil removal of pit TR-1 and a staging area will have occurred. Therefore there is no area bond cost. **Exhibit 1** depicts the projected reclamation areas for the end of the year 0. Details of the area bond calculations are provided in **Table 2**.

D. Incremental Bond

The incremental bond covers all costs beyond those detailed in the area bond. Costs included in the incremental bond are miscellaneous overburden redistribution, demolition, removal of monitoring structures, scarification of all compacted surfaces, topsoil redistribution, and revegetation.

Minor overburden redistribution will be required for the reclamation of SP-4 sediment pond. It is assumed the cost for reclamation of the sediment pond will include the reclamation of the associated collector ditches. **Table 3** displays the overburden redistribution calculations. The location of SP-4 is depicted in **Exhibit 1**. Dozer and scrapers likely will be used to complete this reclamation activity.

No demolition/removal costs are expected for culverts or other associated mining structures for year 0 of the mining sequence. **Table 4** displays demolition costs associated with year 0 of mining.

The details for reclamation of groundwater monitoring, borehole sites and surface water monitoring sites are included in **Table 5**.

The estimated acreage for scarification of planned disturbance through year 0 is included in **Table 6**. Scarification of compacted surfaces will likely be completed with a motor grader, in accordance with WDEQ Guideline 12.

The redistribution of topsoil will likely be completed with scrapers and/or a combination of trucks, loaders, and dozers. A topsoil depth of 16 inches was used as the replacement depth for estimating purposes based on the depth presented in the Reclamation Plan. The volumes of topsoil redistribution are provided in **Table 7**. Topsoil redistribution is depicted in **Exhibit 1**.

The revegetation of all disturbed areas is detailed in **Table 8**. Revegetation costs were estimated at $700 per acre based on other coal bond estimates. Once the mine is in operation a better value will be determined.

E. Miscellaneous Contingency Items

In accordance with the recommendations of WDEQ Guideline 12 several additional miscellaneous items will be part of the overall project cost. These costs include: project design by design firm; contractor profit, overhead, mobilization and demobilization; preconstruction investigation and stabilization; project management; on site monitoring; site security and liability insurance; project administration and accounting; and unknown costs. These miscellaneous items are detailed in **Table 9**.

F. Total Bond Estimate

The total estimated bond for the Brook Mine is depicted in **Table 1**. This total cost includes all direct and indirect costs in accordance with WDEQ Guideline 12. **Exhibit 1** depicts the areas requiring reclamation for year 0 for the Brook Mine.

Table 1. Reclamation Bond Summary through the end of Year 0.

Item	Cost
Area Bond	
Backfill	$ -
Rough Grading Backfill	$ -
Finish Grading	$ -
Area Bond Subtotal	$ -
Incremental Bond	
Overburden Redistribution	$ 21,452
Demolition	$ -
Environmental Monitoring	$ 43,366
Scarification	$ 2,127
Topsoil	$ 84,570
Revegetation	$ 20,930
Incremental Bond Subtotal	$ 172,446
Reclamation Bond Subtotal	**$ 172,446**
Miscellaneous Contingency	$ 180,698
Total Estimated Bond	**$ 353,144**

Table 2. Area Bond Estimate

Description	Unit	Base Quantity	Swell Factor	Final Quantity	Unit Cost	Subtotal	Comments
Pit TR-1 Backfill (Reclaimed Fill)	yd^3	0	100%	0	$ 2.21	$ -	WDEQ/LQD Guideline 12, Appendix A, 992 Loader and 777 Truck,1000 ft. distance, level grade. Also includes WDEQ/LQD Guideline 12, Appendix E, D9T Dozer, 200 ft. distance, level grade.
Pit TR-1 Backfill (Consolidated Interburden)	yd^3	0	116%	0	$ 2.21	$ -	"
			Total	0	$ 2.21	$ -	"
Rough Grading Backfill	ac	-	-	0	$ 70.92	$ -	WDEQ/LQD Guideline 12, Appendix M, 854G Rubber Tire Dozer
Final Grading	ac	-	-	0	$ 77.57	$ -	WDEQ/LQD Guideline 12, Appendix G, 16M Motor Grader
					.	$ -	

Table 3. Overburden Redistribution Estimate

Description	Unit	Base Quantity	Swell Factor	Final Quantity	Unit Cost	Subtotal	Comments
Sediment Ponds							
Sediment Pond SP-4	yd^3	15,400	100%	15,400	$ 1.39	$ 21,452.20	WDEQ/LQD Guideline 12, Appendix E, D9T Dozer, 500 ft. distance, level grade.
			Total	15,400		**$ 21,452.20**	
Total Overburden Redistribution Estimate						**$ 21,452.20**	

Table 4. Demolition Estimate

Description	Unit	Final Quantity	Unit Cost	Subtotal	Comments
Fences	lf	NA	$ 2.00	-	WDEQ/LQD Guideline 12, Appendix H.
Powerlines	lf	NA	$ 0.38	-	"
Hard-surfaced roads	ac	NA	$871.04	-	WDEQ/LQD Guideline 12, Appendix I.
Bridges	ea	NA		-	"
Abandoned Equipment	ea	NA		-	
Railroad	lf	NA	$ 8.78	-	WDEQ/LQD Guideline 12, Appendix K.
Facility Buildings	-	NA		-	WDEQ/LQD Guideline 12, Appendix K.
Mineral Handling Facilities	-	NA		-	WDEQ/LQD Guideline 12, Appendix K.
Culverts[1]					
Culverts	lf	NA	$ 6.88	-	WDEQ/LQD Guideline 12, Appendix J.
Total Demolition Estimate				**$ -**	

Note: NA: Not Available

Table 5. Environmental Monitoring Reclamation Costs [1]

Groundwater Monitoring and Borehole Sites					
Location ID	Depth (ft)	Unit Cost	Site Cost [2]	Seed Cost [2]	Subtotal
SM 578510-CRN-1	91	$ 2.50	$ 25.00	$ 5.00	$ 257.50
SM 578510-MST-1	146	$ 2.50	$ 25.00	$ 5.00	$ 395.00
SM 578511-CRN-1	128	$ 2.50	$ 25.00	$ 5.00	$ 350.00
SM 578511-MST-1	157	$ 2.50	$ 25.00	$ 5.00	$ 422.50
SM 578512-CRN-1	62	$ 2.50	$ 25.00	$ 5.00	$ 185.00
SM 578512-MST-1	114	$ 2.50	$ 25.00	$ 5.00	$ 315.00
SM 578513-CRN-1	116	$ 2.50	$ 25.00	$ 5.00	$ 320.00
SM 578513-MST-1	142	$ 2.50	$ 25.00	$ 5.00	$ 385.00
SM 578418-CRN-1	153	$ 2.50	$ 25.00	$ 5.00	$ 412.50
SM 578418-MST-1	183	$ 2.50	$ 25.00	$ 5.00	$ 487.50
SM 578409-CRN-1	109	$ 2.50	$ 10.00	$ 2.00	$ 284.50
SM 578409-CRN-OB-1	110	$ 2.50	$ 10.00	$ 2.00	$ 287.00
SM 578409-MST-1	122	$ 2.50	$ 10.00	$ 2.00	$ 317.00
SM 578409-MST-OB-1	122	$ 2.50	$ 10.00	$ 2.00	$ 317.00
SM 578409-UNB-1	142	$ 2.50	$ 10.00	$ 2.00	$ 367.00
SM 578415-CRN-MST	182	$ 2.50	$ 50.00	$ 10.00	$ 515.00
SM 578512-AL-1	22	$ 2.50	$ 50.00	$ 10.00	$ 115.00
SM 578513-AL-1	22	$ 2.50	$ 50.00	$ 10.00	$ 115.00
SM 578418-AL-1	27	$ 2.50	$ 50.00	$ 10.00	$ 127.50
R-13-011	222	$ 2.00	$ 50.00	$ 10.00	$ 504.00
R-13-012	202	$ 2.00	$ 50.00	$ 10.00	$ 464.00
R-13-016	904	$ 2.00	$ 50.00	$ 10.00	$ 1,868.00
R-13-018	141	$ 2.00	$ 50.00	$ 10.00	$ 342.00
R-13-019	210	$ 2.00	$ 50.00	$ 10.00	$ 480.00
R-13-020	302	$ 2.00	$ 50.00	$ 10.00	$ 664.00
R-13-023	202	$ 2.00	$ 50.00	$ 10.00	$ 464.00
R-13-024	983	$ 2.00	$ 50.00	$ 10.00	$ 2,026.00
R-13-025	422	$ 2.00	$ 50.00	$ 10.00	$ 904.00
R-13-026	842	$ 2.00	$ 50.00	$ 10.00	$ 1,744.00
Ambre 01	429	$ 2.00	$ 50.00	$ 10.00	$ 918.00
Ambre 02	120	$ 2.00	$ 50.00	$ 10.00	$ 300.00
Ambre 03	96	$ 2.00	$ 50.00	$ 10.00	$ 252.00
Ambre 04	120	$ 2.00	$ 50.00	$ 10.00	$ 300.00
Ambre 05	385	$ 2.00	$ 50.00	$ 10.00	$ 830.00
Ambre 06	421	$ 2.00	$ 50.00	$ 10.00	$ 902.00
Ambre 07	290	$ 2.00	$ 50.00	$ 10.00	$ 640.00
Ambre 09	421	$ 2.00	$ 50.00	$ 10.00	$ 902.00
Ambre 10	325	$ 2.00	$ 50.00	$ 10.00	$ 710.00
Ambre 11	501	$ 2.00	$ 50.00	$ 10.00	$ 1,062.00
R-12006	300	$ 2.00	$ 50.00	$ 10.00	$ 660.00
R-12008	201	$ 2.00	$ 50.00	$ 10.00	$ 462.00
R-12009A	65	$ 2.00	$ 50.00	$ 10.00	$ 190.00
R-12010	120	$ 2.00	$ 50.00	$ 10.00	$ 300.00
R-12011	92	$ 2.00	$ 50.00	$ 10.00	$ 244.00
R-12012	136	$ 2.00	$ 50.00	$ 10.00	$ 332.00
R-12013	300	$ 2.00	$ 50.00	$ 10.00	$ 660.00
R-12014	220	$ 2.00	$ 50.00	$ 10.00	$ 500.00

Table 5. Environmental Monitoring Reclamation Costs Cont. [1]

Groundwater Monitoring and Borehole Sites					
Location ID	**Depth (ft)**	**Unit Cost**	**Site Cost [2]**	**Seed Cost [2]**	**Subtotal**
R-12015	221	$ 2.00	$ 50.00	$ 10.00	$ 502.00
R-12018D	142	$ 2.00	$ 50.00	$ 10.00	$ 344.00
R-12019D	140	$ 2.00	$ 50.00	$ 10.00	$ 340.00
				Sub-total	**$ 26,785.00**
				22% contingency	**$ 5,892.70**
				Groundwater Monitoring and Borehole Site Total:	**$ 32,677.70**
Surface Water Monitoring Sites					
SM578418-SW-1					$ 2,672.16
SM578512-SW-1					$ 2,672.16
SM578409-SW-1					$ 2,672.16
SM578415-SW-1					$ 2,672.16
				Surface Water Monitoring Site Total:	**$ 10,688.64**
				Total Environmental Monitoring Estimate:	**$ 43,366.34**

Notes: [1] Bond estimate based on WDEQ Guideline 12.

[2] Site and seed cost divided among well clusters.

Table 6. Scarification Estimate

Description	Unit	Final Quantity	Unit Cost	Subtotal	Comments
Currently affected area	ac	0	$ 71.15	$ -	WDEQ/LQD Guideline 12, Appendix P.
Planned disturbance through Year 0	ac	29.9	$ 71.15	$ 2,127.39	"
Total Scarification Estimate				**$ 2,127.39**	

Table 7. Topsoil Estimate

Description	Unit	Base Quantity	Unit	Final Quantity [1]	Unit Cost	Subtotal	Comments
pit TR-1	ac	20.7	yd^3	44,528	$ 1.73	$ 76,964.42	WDEQ/LQD Guideline 12, Appendix C, 637G Scraper, 1,500 ft. average distance, level grade with 15% increase for topsoil.
Sediment Ponds							
SP-4	ac	2.0	yd^3	4,302	$ 1.26	$ 5,432.42	WDEQ/LQD Guideline 12, Appendix C, 637G Scraper, 500 ft. distance, level grade with 15% increase for topsoil.
Overbuden Stock Piles							
OB-3	ac	0.8	yd^3	1,721	$ 1.26	$ 2,172.97	WDEQ/LQD Guideline 12, Appendix C, 637G Scraper, 500 ft. distance, level grade with 15% increase for topsoil.
					Total Topsoil Estimate	**$ 84,569.80**	

Note: [1] Topsoil depth of 16 inches was used based on Reclamation Plan for volume calculations in all areas.

Table 8. Revegetation Estimate

Description	Unit	Final Quantity	Unit Cost	Subtotal	Comments
Planned disturbance through Year 0	ac	29.9	$700.00	$ 20,930.00	Estimate including revegetation of topsoil piles footprints.
Total Revegetation Estimate				**$ 20,930.00**	

Table 9. Miscellaneous Contingency Items

Item	Cost	Description
Independent design firm for final reclamation design	$ -	WDEQ/LQD Guideline 12, LQD and WMA agreed to flat $250,000 for project design regardless of project size. Cost reduced based on project size.
Contractor profit, overhead, mobilization and demobilization costs	$ 23,280.17	WDEQ/LQD Guideline 12, LQD is presently using 13.5 percent for these items.
Preconstruction investigation and stabilization	$ 2,586.69	WDEQ/LQD Guideline 12, LQD is presently using 1.5 percent for these items.
Independent firm to manage the final reclamation project (5.5 percent)	$ 9,484.52	WDEQ/LQD Guideline 12, Appendix R sliding scale.
On site monitoring program for ten years after completion of final reclamation project	$ 1,724.46	WDEQ/LQD Guideline 12, LQD is presently using 1 percent for these items.
Costs for on site security during the final reclamation project and liability insurance cost during the final reclamation project and over the full bonding period (6 months).	$ 125,000.00	WDEQ/LQD Guideline 12, LQD and WMA agreed to $250,000 per year of project life would be adequate.
Long-term administration and accounting cost	$ 10,000.00	WDEQ/LQD Guideline 12, LQD and WMA agreed to range of $315,000 to $505,000 depending on project size. Cost reduced based on project size.
Unknown costs	$ 8,622.29	WDEQ/LQD Guideline 12, LQD is presently using 5 percent for these items.
Total Contingency Estimate	**$ 180,698.12**	

WWC
ENGINEERING

From:	Jeff Barron
To:	BJ Kristiansen
Subject:	RE: FW: TFN 6 2/025 Round 3 Comments Addenda
Date:	Wednesday, December 30, 2015 3:57:12 PM
Attachments:	BOND.pdf image001.jpg

BJ,

Here is the Bond Map. I forgot to add it.

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 1:48 PM
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

Please email it and I'll jump to it right away.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:30 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

It was in a separate binder in that package. I can email the electronic version if necessary.

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 1:29 PM
To: Jeff Barron
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

Did you provide a new bond estimate package based on the recent changes to the beginning of mine life? We were going to go along with the old one but that was before you changed the first year plan to be more like Young's Creek. We need your bond estimate to begin our final number generation.

From: Jeff Barron [mailto:jbarron@wwcengineering.com]
Sent: Wednesday, December 30, 2015 1:07 PM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: RE: FW: TFN 6 2/025 Round 3 Comments Addenda

BJ,

Is there any action on my part necessary for the bond?

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, December 30, 2015 12:47 PM

To: Jeff Barron
Subject: FW: FW: TFN 6 2/025 Round 3 Comments Addenda

Jeff,

As you can see, Matt accepted your updated MP language concerning his question 124. All we have left is the bond calculation, which Doug is waiting for, and the legal stuff with the AG's office. I am also finishing up my AVF determination and should be done by the middle to end of next week. We are drawing to a close of this phase of the permitting process.

-bj

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 11:27 AM
To: BJ Kristiansen <bj.kristiansen@wyo.gov>
Subject: Re: FW: TFN 6 2/025 Round 3 Comments Addenda

Bj,

Yes, the response to Comment MK124 is accepted.

Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 11:23 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Check this text to see if it addresses your comment 124 issues. I highlighted the areas that appear to comply with your request. Ignore the page numbers since I deleted some of the pages for size reasons. Let me know if this suffices. You are the only reviewer left, other than Andrew with the surface use issues. This is, for all intents and purposes, a Round 4 action. Please reply through this email and I will use it as the narrative for the final document package.
>
> -bj
>
> ---
>
> **From:** Jeff Barron [mailto:jbarron@wwcengineering.com]
> **Sent:** Wednesday, December 30, 2015 9:29 AM
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Subject:** TFN 6 2/025 Round 3 Comments Addenda

BJ,

Below find Matt Kunze comment 124 and our response. Section MP.6.1 has been updated and a reference to section MP.8.

MK124

MP.8 Water Use
5. This section has been revised in this round to remove groundwater wells as a source of water for the mine. As shown in the new Table MP.8-I, surface water rights are now expected to provide 227,000 gpd, or 69 percent of the mine's water use. In the text, please provide further discussion on how and where these surface water rights will be obtained. For example, are these existing surface water rights that the mine already has rights to, and if so where are the rights located? The Mine Plan PHC (Section MP.6.1) also needs revised as this new plan for water use has not been analyzed for any effect on decreasing surface water quantity. (MDK)

Response: Text has been updated as requested (see attached .doc)

Jeff Barron, P.E. | Project Manager
1849 Terra Avenue | Sheridan, WY 82801
Tel 307-672-0761 | Cell 307-751-1427
www.wwcengineering.com

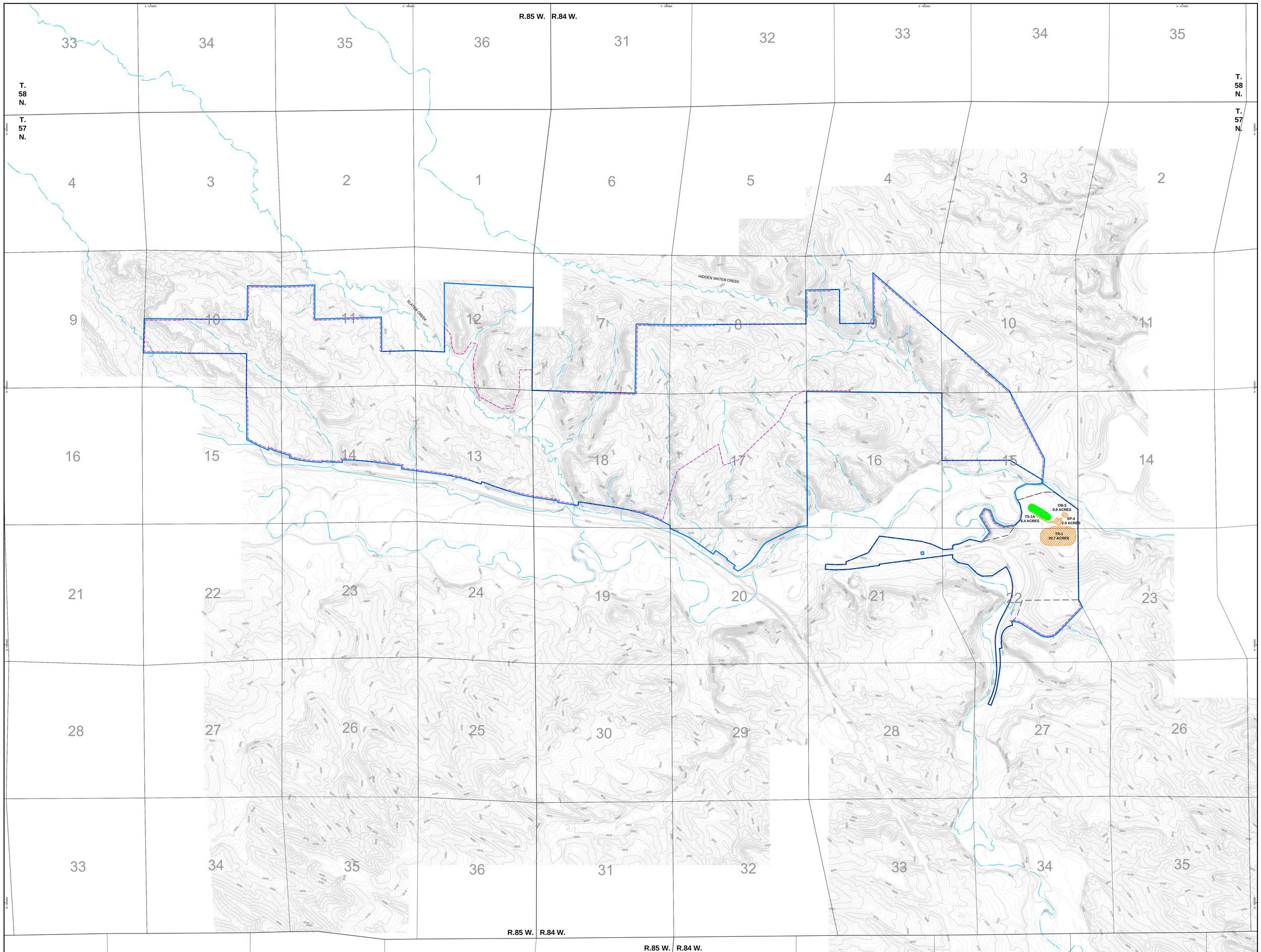
E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.



LEGEND

- BROOK MINE PERMIT BOUNDARY
- AFFECTED AREA BOUNDARY
- DISTURBANCE BOUNDARY (YEAR 0)
- TOPSOIL FROM TS-1A STOCKPILE
- TOPSOIL STOCKPILE

N

0 500 1,000 1,500 2,000
GRAPHIC SCALE (FEET)
C.I. = 5'

RAMACO

BROOK MINE
SHERIDAN COUNTY, WY

1101 SUGARVIEW DR, STE. 201
SHERIDAN, WY 82801

REVISIONS	
Date	Description

EXHIBIT 1

2015 BOND
TOPSOIL REDISTRIBUTION AREAS

Drawn By: DCJ
Checked By: JGB
Date: 11/2/15

WWC ENGINEERING
www.wwcengineering.com

FILE: BOND.dwg

K:\Sheridan\RAMACO\11\1\BROOD_ESTIMATE_R2\DWG\BOND.dwg 11/20/2015 10:00:03 AM dave johnson

WWC
ENGINEERING

From: Muthu Kuchanur
To: Matthew Kunze
Subject: Re: Brook Mine CHIA - Groundwater Rights Map
Date: Thursday, December 31, 2015 7:38:12 AM

Thanks Matt

Muthu Kuchanur, Ph.D., P.E.

Geology Supervisor,
Division Services - Land Quality Division,
Wyoming Department of Environmental Quality,
Cheyenne - 82001

Phone: 307-777-7132
Email: muthu.kuchanur@wyo.gov

On Wed, Dec 30, 2015 at 11:07 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Muthu,
>
> I was able to add a surface water rights map for the CHIA by querying the SEO database by Township/Range and then exporting to excel. I did not realize this before, but there is a lat/long for most water rights in the SEO database. So it seems I should be able to add a similar map for surface water rights as we do for groundwater rights.
>
> Also, assuming that the "evaluation area" for groundwater will be the same as surface water, I also made a map for the groundwater rights. This is now Figure 38 and is inserted in Section 4.2.1. I was originally going to see if we could put both surface and groundwater rights on one map but it would be too busy.
>
> Matt
>
>
> ---
> Matt Kunze
> Surface Water Hydrologist, Division Services
> Wyoming Department of Environmental Quality, Land Quality Division
> 200 West 17th Street, Lower Level
> Cheyenne, WY 82002
> 307-777-7055
>
>
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.
>

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

From: andrew kuhlmann
To: Alan Edwards
Subject: Meeting on Brook mining and other issues
Date: Monday, January 11, 2016 9:17:02 AM

Alan,

I had to call in sick today, so I won't be able to meet with you about Brook mining today. However, I was wondering if you might be available first thing tomorrow. I have a meeting with Kyle and Todd at 9, but I could come over to DEQ at 8 to meet with you. If that early time doesn't work I think I'm free any time after my 9am meeting finishes up.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Alan Edwards
To: andrew kuhlmann
Subject: Re: Meeting on Brook mining and other issues
Date: Monday, January 11, 2016 5:23:37 PM

It works better for me to meet when you are done with Todd. Alan

Sent from my iPhone

On Jan 11, 2016, at 9:17 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Alan,
>
> I had to call in sick today, so I won't be able to meet with you about Brook mining today. However, I was wondering if you might be available first thing tomorrow. I have a meeting with Kyle and Todd at 9, but I could come over to DEQ at 8 to meet with you. If that early time doesn't work I think I'm free any time after my 9am meeting finishes up.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue ***Please note the new mailing address**
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Alan Edwards
To: andrew kuhlmann
Subject: Re: Meeting on Brook mining and other issues
Date: Monday, January 11, 2016 5:25:22 PM

Actually when you are done with Todd maybe we can meet with him to brief him.
Alan

Sent from my iPhone

On Jan 11, 2016, at 9:17 AM, andrew kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Alan,
>
> I had to call in sick today, so I won't be able to meet with you about Brook mining today. However, I was wondering if you might be available first thing tomorrow. I have a meeting with Kyle and Todd at 9, but I could come over to DEQ at 8 to meet with you. If that early time doesn't work I think I'm free any time after my 9am meeting finishes up.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	andrew kuhlmann
To:	Alan Edwards
Subject:	Re: Meeting on Brook mining and other issues
Date:	Tuesday, January 12, 2016 8:19:56 AM

Alan,

That sounds good.

Andrew
--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: BJ Kristiansen
To: andrew kuhlmann
Cc: mark.rogaczewski@wyo.gov; Kyle Wendtland
Subject: Brook Mine surface use agreements in lieu of Form 8, TFN 6 2/025
Date: Tuesday, January 12, 2016 11:55:16 AM

Andrew,

How is it going for the AG's opinion on the Brook Mine surface use issues? WWC has been calling for Ramaco and I told them I would update them as soon as we know where you stand. I'm not getting nervous…yet. Give me a holler whenever you can break away and we can discuss it.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Jeff Barron
Subject:	Re: Comment 124
Date:	Wednesday, January 13, 2016 9:26:35 AM
Attachments:	P18765.pdf image001.jpg

Jeff,

Just for clarification, do you know if the historical water right held by Sheridan Wyoming Coal that you were referring to is SEO Permit 18765.0D? According to SEO records, this is called Monarch Pipeline on the Tongue River. I have attached the summary from the SEO database.

Thanks, Matt

Matt Kunze
Surface Water Hydrologist, Division Services
Wyoming Department of Environmental Quality, Land Quality Division
200 West 17th Street, Lower Level
Cheyenne, WY 82002
307-777-7055

On Wed, Dec 30, 2015 at 9:32 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> I have sent the updated text to BJ, to address your comment.
>
> **From:** Matthew Kunze [mailto:matthew.kunze@wyo.gov]
> **Sent:** Wednesday, December 30, 2015 8:13 AM
> **To:** Jeff Barron
> **Subject:** Re: Comment 124
>
> Ok thanks. I will look out for the updated pages from Bj.
>
> Matt
>
> ---
>
> Matt Kunze
>
> Surface Water Hydrologist, Division Services
>
> Wyoming Department of Environmental Quality, Land Quality Division

200 West 17th Street, Lower Level

Cheyenne, WY 82002

307-777-7055

On Wed, Dec 30, 2015 at 8:11 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:

Thanks Matt for your input. I will be providing the updated pages today to BJ.

From: Matthew Kunze [mailto:matthew.kunze@wyo.gov]
Sent: Wednesday, December 30, 2015 8:05 AM
To: Jeff Barron
Subject: Re: Comment 124

Jeff,

I think what you have inserted in MP.6.1 works but I have some suggested language below to help clarify and also provide reference to Table MP.8-1:

Table MP.8-1 shows the estimated water required for specific uses at the Brook Mine and the water sources. As indicated in Table MP.8-1, surface water rights may supply up to 227,000 gpd, or 69 percent of the mine's water supply needs. Water rights for use within the permit boundary will be obtained by utilizing historical active Sheridan Wyoming Coal rights dating before 1950, purchasing water rights from downstream users potentially including those in Montana with excess rights, or obtaining new rights on the Tongue River which will be subject to the Yellowstone Compact. Surface water use is anticipated to continue much as it has before mining with additional water retained within the permit boundary as it is used for dust abatement and pollution control. Section MP.8 discusses the amount of water that may be potentially used for dust abatement. Water may also be temporarily detained in sediment ponds prior to the release of water downstream after effluent criteria are met.

The Brook Mine will not likely have any impact on downstream water rights. Any surface water right that is disturbed or affected by the mining operations of the Brook Mine, shall have that water right replaced with a water source of similar quantity and quality as provided by Wyoming Statute § 35-11-415(b)(xii), until such time that the original surface water right's functionality is restored.

Matt Kunze

Surface Water Hydrologist, Division Services

Wyoming Department of Environmental Quality, Land Quality Division

200 West 17th Street, Lower Level

Cheyenne, WY 82002

307-777-7055

On Tue, Dec 29, 2015 at 3:25 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:

Matt,

Thanks for your time on the phone. Please find attached the revised text for your intial review. This updates section MP.6.1 and MP.8 Let me know if this works or any input you may have.

Jeff Barron, P.E. | Project Manager

1849 Terra Avenue | Sheridan, WY 82801

Tel 307-672-0761 | Cell 307-751-1427

www.wwcengineering.com

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Print

Permit Summary

Instrument: FIRST PERMIT ON A FACILITY FOR A DITCH, PIPELINE OR PUMP

Facility Name:	MONARCH PIPE LIN	Water Right Status:	FULLY ADJUDICATE
Application Number:		Date Accepted for Processing:	
Temporary File Number:		Priority Date:	09/03/1935
Permit Number:	P18765.0D	Division:	2 District: 5
Proof Number:			
Docket Number:		SC Original Expiration Date:	
Order Number:		SC Extended Expiration Date:	
Certificate Record Number:		SC Actual Date:	
Auto Cancellation Date:		BU Original Expiration Date:	
Extended Auto Cancellation Date:		BU Extended Expiration Date:	
Last Modified By:		BU Actual Date:	
Created By:		Last Modified Date:	01/01/1800

General Info

Type Of Diversion	Supply Type	Special Cases
Stream	Original Supply	

Prefix	Water Right Number	Suffix

Appropriator(s)

Appropriator	Last Name	First Name	Company	City	State
Applicant	SHERIDAN WY COAL CO.			Monarch	Wyoming

Agent

Beneficial Uses

Beneficial Uses:	Irrigation-- Surface water

Water Right POD

Principal Meridian	Township	Range	Section	Quarter	Qtr-Qtr	SurveyType	Number	Primary POD
06	057N	084W	20	NW	SWNW			Y

Stream Source

Source	Tributary Of	Tributaty Of	Tributary Of	WR Number Type	WR Number
Tongue River	Yellowstone River	Missouri River		P	18765

Water Right POU

Principal Meridian	Township	Range	Section	Quarter	Q-Q	WR Status	Acres	Use	Sub Use	Supply Type
06	057N	084W	19	NE	NENE	ADJUDICATED	6.570	Irrigation--Surface water		ORIGINAL
06	057N	084W	19	NE	SENE	ADJUDICATED	9.980	Irrigation--Surface water		ORIGINAL
06	057N	084W	20	NW	SWNW	ADJUDICATED	1.350	Irrigation--Surface water		ORIGINAL

1

Supply Type	Acres
Original	17.900

Total acres irrigated: 17.900

Comments

Created Date	Comment Details	Created by
1/1/1800 12:00:00 AM	Remuna AprAmt,AprUnit,Use :0CFSIRR	MIGRATED

1

Documents

Document Type	Document Name	Document Date	Document Created by	Document Uploaded by	Uploaded Date	View

[+] **Map**

[+] **Micro film** (There are more than 5 documents with this document type, but only latest 5 documents are shown.)

[+] **Permit**

Remarks

Appropriation Amount

Permitted Amount for Surface Water (Irrigation-- Surface water)

Permitted Amount:

Total Flow (CFS)	Total Capacity (AF/Yr)	Diversion capacity at the headgate (CFS)
0.260	0.000	0.89

Related Transactions

WWC
ENGINEERING

From:	BJ Kristiansen
To:	andrew kuhlmann
Subject:	Brook mine decision
Date:	Thursday, January 14, 2016 2:16:32 PM
Attachments:	image001.jpg

Andrew,

WWC is now calling hourly. How are you doing with the AG decision?

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	andrew kuhlmann
To:	BJ Kristiansen
Subject:	Brook Mining application comments
Date:	Thursday, January 14, 2016 4:08:37 PM
Attachments:	2016-1-14 DRAFT Comments on Brook Mining application.docx

---

BJ,

Attached are the comments I drafted on Brook Mining's adjudication section of the permit application.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

The Department of Environmental Quality, Land Quality Division ("Division") received and reviewed the Applicant's responses to the Division's third round of comments on the adjudication section of the permit application. In a letter from the Applicant's counsel, dated December 15, 2015, the Applicant clarified its position regarding the effect of the 1954 Deed between Sheridan-Wyoming Coal Company ("Sheridan Coal") and the Big Horn Coal Company ("Big Horn") on the written consent requirement in Wyoming Statute § 35-11-406(b)(xi) and (xii). The Applicant also provided information about the proper landowner classification under those subsections for Big Horn and the Padlock Ranch Company ("Padlock Ranch"), who both own lands within the permit area.

The Applicant's responses allowed the Division to fully evaluate the 1954 Deed with regard to the written consent requirement for the lands at issue. Based on that review, the application is still deficient at this time.

The 1954 Deed does not appear to provide written consent from Big Horn or Padlock Ranch to the proposed mine and reclamation plans. Therefore, the 1954 Deed does not satisfy the requirements in Wyoming Statute § 35-11-406(b)(xi) and (xii). Further, contrary to the Applicant's position, the consent requirement remains applicable to this application even after considering the language of the 1954 Deed in conjunction with the case, *WYMO Fuels, Inc., v. Edwards*, 723 P.2d 1230 (Wyo. 1986). Finally, with respect to Big Horn's lands, the 1983 lease release agreement between Sheridan Coal and Big Horn also does not appear to provide consent to the mine or reclamation plans, and thus does not satisfy the written consent requirement.

Therefore, the Division asks that the Applicant provide, at its earliest convenience, documents meeting the written consent requirement. Based on the information provided by the Applicant, the written consent related to Padlock Ranch's lands would likely fall under the requirements in Wyoming Statute § 35-11-406(b)(xi), while the consent for Big Horn's lands is probably subject to Wyoming Statute § 35-11-406(b)(xii).

From:	BJ Kristiansen
To:	jbarron@wwcengineering.com
Cc:	andrew kuhlmann; Kyle Wendtland; Alan Edwards; mark.rogaczewski@wyo.gov
Subject:	Brook Mine Round 4 Permit Application Comments, Adjudication section, TFN 6 2/025
Date:	Thursday, January 14, 2016 4:18:23 PM
Attachments:	round4comments.pdf image002.jpg

Jeff,

LQD has completed the Round 4 Adjudication technical review. The attached memorandum details the LQD comments to be considered by Ramaco for the Brook Mine permit application. A formalized cover letter with the Round 4 comments will be printed and placed in the mail tomorrow, January 15, 2016. Please contact me with any questions or considerations.

-Bj Kristiansen

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

January 14, 2016

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Round 4 Technical Review, Brook Mine Coal Mine Permit Application, Adjudication Volume, TFN 6 2/025

Dear : Mr. Atkins

The Land Quality Division received your Round 3 Adjudication comment responses from Holland and Hart on December 15, 2015. The statutory requirement for LQD to respond to the second round responses is 30 days from date of receipt, which is January 14, 2016. The responses from your attorneys have been reviewed in their entirety and comments, questions, noteworthy deficiencies, and requests for additional information were generated for Round 4. These have been gathered by the permit coordinator and are presented as an attachment to this letter.

Please review the Fourth Round Adjudication comments and prepare your replies accordingly. Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round 4 materials. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III

Cc: Cheyenne LQD files w/attachment

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

Land Quality Division Round 4 Comments
Brook Mine Permit Application, TFN 6 2/025
Adjudication Section

LQD comments are as follows:

The Department of Environmental Quality, Land Quality Division ("Division") received and reviewed the Applicant's responses to the Division's third round of comments on the adjudication section of the permit application. In a letter from the Applicant's counsel, dated December 15, 2015, the Applicant clarified its position regarding the effect of the 1954 Deed between Sheridan-Wyoming Coal Company ("Sheridan Coal") and the Big Horn Coal Company ("Big Horn") on the written consent requirement in Wyoming Statute § 35-11-406(b)(xi) and (xii). The Applicant also provided information about the proper landowner classification under those subsections for Big Horn and the Padlock Ranch Company ("Padlock Ranch"), who both own lands within the permit area.

The Applicant's responses allowed the Division to fully evaluate the 1954 Deed with regard to the written consent requirement for the lands at issue. Based on that review, the application is still deficient at this time.

The 1954 Deed does not appear to provide written consent from Big Horn or Padlock Ranch to the proposed mine and reclamation plans. Therefore, the 1954 Deed does not satisfy the requirements in Wyoming Statute § 35-11-406(b)(xi) and (xii). Further, contrary to the Applicant's position, the consent requirement remains applicable to this application even after considering the language of the 1954 Deed in conjunction with the case, *WYMO Fuels, Inc., v. Edwards*, 723 P.2d 1230 (Wyo. 1986). Finally, with respect to Big Horn's lands, the 1983 lease release agreement between Sheridan Coal and Big Horn also does not appear to provide consent to the mine or reclamation plans, and thus does not satisfy the written consent requirement.

Therefore, the Division asks that the Applicant provide, at its earliest convenience, documents meeting the written consent requirement. Based on the information provided by the Applicant, the written consent related to Padlock Ranch's lands would likely fall under the requirements in Wyoming Statute § 35-11-406(b)(xi), while the consent for Big Horn's lands is probably subject to Wyoming Statute § 35-11-406(b)(xii).

From:	andrew kuhlmann
To:	Thomas Sansonetti; Isaac Sutphin
Subject:	Brook Mining"s permit application - Round 4 Comments
Date:	Thursday, January 14, 2016 4:20:32 PM
Attachments:	Brook Mining Round 4 Comments.pdf

Tom and Isaac,

I wanted to let you know that the Department of Environmental Quality, Land Quality Division is sending out a fourth round of comments on Brook Mining's permit application. Attached is a copy.

The Division has concluded that the application is still deficient. If you have questions or want to discuss the comments, please give me a call.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

January 14, 2016

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Round 4 Technical Review, Brook Mine Coal Mine Permit Application, Adjudication Volume, TFN 6 2/025

Dear : Mr. Atkins

The Land Quality Division received your Round 3 Adjudication comment responses from Holland and Hart on December 15, 2015. The statutory requirement for LQD to respond to the second round responses is 30 days from date of receipt, which is January 14, 2016. The responses from your attorneys have been reviewed in their entirety and comments, questions, noteworthy deficiencies, and requests for additional information were generated for Round 4. These have been gathered by the permit coordinator and are presented as an attachment to this letter.

Please review the Fourth Round Adjudication comments and prepare your replies accordingly. Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round 4 materials. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III

Cc: Cheyenne LQD files w/attachment

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

Land Quality Division Round 4 Comments
Brook Mine Permit Application, TFN 6 2/025
Adjudication Section

LQD comments are as follows:

The Department of Environmental Quality, Land Quality Division ("Division") received and reviewed the Applicant's responses to the Division's third round of comments on the adjudication section of the permit application. In a letter from the Applicant's counsel, dated December 15, 2015, the Applicant clarified its position regarding the effect of the 1954 Deed between Sheridan-Wyoming Coal Company ("Sheridan Coal") and the Big Horn Coal Company ("Big Horn") on the written consent requirement in Wyoming Statute § 35-11-406(b)(xi) and (xii). The Applicant also provided information about the proper landowner classification under those subsections for Big Horn and the Padlock Ranch Company ("Padlock Ranch"), who both own lands within the permit area.

The Applicant's responses allowed the Division to fully evaluate the 1954 Deed with regard to the written consent requirement for the lands at issue. Based on that review, the application is still deficient at this time.

The 1954 Deed does not appear to provide written consent from Big Horn or Padlock Ranch to the proposed mine and reclamation plans. Therefore, the 1954 Deed does not satisfy the requirements in Wyoming Statute § 35-11-406(b)(xi) and (xii). Further, contrary to the Applicant's position, the consent requirement remains applicable to this application even after considering the language of the 1954 Deed in conjunction with the case, *WYMO Fuels, Inc., v. Edwards*, 723 P.2d 1230 (Wyo. 1986). Finally, with respect to Big Horn's lands, the 1983 lease release agreement between Sheridan Coal and Big Horn also does not appear to provide consent to the mine or reclamation plans, and thus does not satisfy the written consent requirement.

Therefore, the Division asks that the Applicant provide, at its earliest convenience, documents meeting the written consent requirement. Based on the information provided by the Applicant, the written consent related to Padlock Ranch's lands would likely fall under the requirements in Wyoming Statute § 35-11-406(b)(xi), while the consent for Big Horn's lands is probably subject to Wyoming Statute § 35-11-406(b)(xii).

From:	Alan Edwards
To:	BJ Kristiansen
Cc:	jbarron@wwcengineering.com; andrew kuhlmann; Kyle Wendtland; Mark Rogaczewski; Todd Parfitt
Subject:	Re: Brook Mine Round 4 Permit Application Comments, Adjudication section, TFN 6 2/025
Date:	Thursday, January 14, 2016 4:37:08 PM
Attachments:	image002.jpg

Good Job BJ and Andrew. Thank you. Alan

On Thu, Jan 14, 2016 at 4:21 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Jeff,
>
> LQD has completed the Round 4 Adjudication technical review. The attached memorandum details the LQD comments to be considered by Ramaco for the Brook Mine permit application. A formalized cover letter with the Round 4 comments will be printed and placed in the mail tomorrow, January 15, 2016. Please contact me with any questions or considerations.
>
> -Bj Kristiansen
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3
>
> 2100 W. 5th St.
>
> Sheridan, WY 82801
>
> Off: (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction

> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Kyle Wendtland
To: Alan Edwards
Subject: Fwd: Concerns regarding Ramaco permit
Date: Friday, January 15, 2016 10:53:13 AM

Alan:

I apologize for the delay in sending this to you, I just fond my note. This is the email chain and letter from PRBRC relating to Ramaco.

Kyle

---------- Forwarded message ----------
From: **Alan Edwards** <alan.edwards@wyo.gov>
Date: Wed, Dec 23, 2015 at 7:33 AM
Subject: Re: Concerns regarding Ramaco permit
To: Alan Edwards <alan.edwards@wyo.gov>
Cc: Mark Rogaczewski <mark.rogaczewski@wyo.gov>, BJ Kristiansen <bj.kristiansen@wyo.gov>, Kyle Wendtland <kyle.wendtland@wyo.gov>

I have talked this over with Andrew and have an idea how to respond. Andrew and I will get together after the first of the year. When we have an idea fleshed out I will set up a call to discuss and get your input.

Have a good holiday.

Alan

Sent from my iPhone

On Dec 18, 2015, at 10:34 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> Thanks Mark. I will look it over and try to get back to everyone next week. Alan
>
> Sent from my iPhone
>
> On Dec 18, 2015, at 10:26 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Alan,
>>
>> Kyle asked me to forward the attached letter from the Powder River Basin Resource Council to you. He has also asked that I respond to Ms. Anderson stating a response will be sent from you as Kyle cannot respond due to a conflict of interest. Please let BJ or I know if you have any questions/concerns.
>>
>> Thanks,

Mark
---------- Forwarded message ----------
From: **Shannon Anderson** <sanderson@powderriverbasin.org>
Date: Tue, Dec 15, 2015 at 3:37 PM
Subject: Concerns regarding Ramaco permit
To: kyle.wendtland@wyo.gov
Cc: Mark Rogaczewski <mark.ROGACZEWSKI@wyo.gov>, Bj Kristiansen <bj.kristiansen@wyo.gov>, andrew kuhlmann <andrew.kuhlmann@wyo.gov>

Dear Kyle,

Please see the attached letter regarding the Ramaco coal mine permit. We look forward to your and your staff's response.

Thank you,

Shannon

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

sanderson@powderriverbasin.org

Join us at www.powderriverbasin.org

Follow us at https://twitter.com/PRBResCouncil

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801

307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

<2015 12-15 ltr to DEQ re Ramaco permit.pdf>

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: mark.rogaczewski@wyo.gov; andrew kuhlmann; Alan Edwards
Cc: Kyle Wendtland
Subject: Brook Mine permit application, TFN 6 6/025
Date: Friday, January 15, 2016 11:42:30 AM
Attachments: image002.jpg

Gentlemen,

I received a call this morning from Jeff Barron, the lead engineer from WWC who is the project coordinator for the Ramaco Brook Mine permit application. He asked a question about modifying the permit application. He wanted to know what the LQD response would be if Ramaco contracted the permit boundary, as outlined in the permit application, to remove lands owned by Big Horn Coal and Padlock Ranch. I asked him to put together their proposal and contact us when that was done to set up a face to face meeting in Sheridan. I would expect to have our LQD reviewers also involved in any meetings to determine how much work would be necessary to modify the existing permit application document. This would entail a new Form 1 and new adjudication at the least. In talking to Mark, it appears that this might start the permitting process again, with public notice and the other contingencies that are involved with a new permit application, such as the 150 day Round 1 Technical review period. Since we already have run four rounds of technical review on the original document and the only outstanding issue was the surface owner permissions, I assume that the technical review cycle for a new application would be truncated to a much shorter period than the 15 months we have already spent with this application. It would be reasonable for Ramaco to request an expedited review but any time commitments would have to wait on defining the exact nature of the changes to the application. When I receive specifics on this possibility, I'll let you know and we will craft a plan from that point.

-bj

Bj Kristiansen, P.G.
Department of Environmental Quality
Natural Resources Program Principal
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801
Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	BJ Kristiansen
Cc:	andrew kuhlmann; Alan Edwards; Kyle Wendtland
Subject:	Re: Brook Mine permit application, TFN 6 6/025
Date:	Friday, January 15, 2016 11:44:59 AM
Attachments:	image002.jpg

BJ,

Thanks for the update.

Mark

On Fri, Jan 15, 2016 at 11:45 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen,
>
> I received a call this morning from Jeff Barron, the lead engineer from WWC who is the project coordinator for the Ramaco Brook Mine permit application. He asked a question about modifying the permit application. He wanted to know what the LQD response would be if Ramaco contracted the permit boundary, as outlined in the permit application, to remove lands owned by Big Horn Coal and Padlock Ranch. I asked him to put together their proposal and contact us when that was done to set up a face to face meeting in Sheridan. I would expect to have our LQD reviewers also involved in any meetings to determine how much work would be necessary to modify the existing permit application document. This would entail a new Form 1 and new adjudication at the least. In talking to Mark, it appears that this might start the permitting process again, with public notice and the other contingencies that are involved with a new permit application, such as the 150 day Round 1 Technical review period. Since we already have run four rounds of technical review on the original document and the only outstanding issue was the surface owner permissions, I assume that the technical review cycle for a new application would be truncated to a much shorter period than the 15 months we have already spent with this application. It would be reasonable for Ramaco to request an expedited review but any time commitments would have to wait on defining the exact nature of the changes to the application. When I receive specifics on this possibility, I'll let you know and we will craft a plan from that point.
>
> -bj
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3

2100 W. 5th St.

Sheridan, WY 82801

Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	BJ Kristiansen
Cc:	Jeff Barron; andrew kuhlmann; Kyle Wendtland; Alan Edwards
Subject:	Re: Brook Mine Round 4 Permit Application Comments, Adjudication section, TFN 6 2/025
Date:	Friday, January 15, 2016 11:45:46 AM
Attachments:	image002.jpg

Thanks and nice job!

Mark

On Thu, Jan 14, 2016 at 4:21 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Jeff,
>
> LQD has completed the Round 4 Adjudication technical review. The attached memorandum details the LQD comments to be considered by Ramaco for the Brook Mine permit application. A formalized cover letter with the Round 4 comments will be printed and placed in the mail tomorrow, January 15, 2016. Please contact me with any questions or considerations.
>
> -Bj Kristiansen
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3
>
> 2100 W. 5th St.
>
> Sheridan, WY 82801
>
> Off: (307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Isaac Sutphin
To:	andrew kuhlmann
Subject:	RE: Brook Mining"s permit application - Round 4 Comments
Date:	Tuesday, January 19, 2016 1:31:38 PM
Attachments:	image001.gif

Andrew,

Do you have time this afternoon for a quick discussion about the Brook Mine permit application? We have a few questions and want to fill you in on some recent developments. Please let me know if you are available any time after 2:30.

Thanks,

IS

Isaac N. Sutphin, P.C.
Partner

CONFIDENTIALITY NOTICE: This message is confidential and may be privileged. If you believe that this email has been sent to you in error, please reply to the sender that you received the message in error; then please delete this e-mail. Thank you.

From: andrew kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Thursday, January 14, 2016 4:21 PM
To: Thomas Sansonetti; Isaac Sutphin
Subject: Brook Mining's permit application - Round 4 Comments

Tom and Isaac,

I wanted to let you know that the Department of Environmental Quality, Land Quality Division is sending out a fourth round of comments on Brook Mining's permit application. Attached is a copy.

The Division has concluded that the application is still deficient. If you have questions or want to discuss the comments, please give me a call.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue ***Please note the new mailing address**
Cheyenne, WY 82002
307-777-3537 - Phone

307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

HOLLAND&HART LLP

THE LAW OUT WEST

From: Andrew Kuhlmann
To: Isaac Sutphin
Subject: Re: Brook Mining"s permit application - Round 4 Comments
Date: Tuesday, January 19, 2016 2:21:58 PM

Isaac,

I'm free this afternoon any time after 2:30. Feel free to call me whenever it's convenient for you.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

From: Alan Edwards
To: andrew.kuhlmann@wyo.gov; Mark Rogaczewski; BJ Kristiansen; Alan Edwards
Subject: Invitation: Conference call - Brook Mine @ Thu Jan 21, 2016 3:30pm - 4:30pm (Andrew Kuhlmann)
Date: Thursday, January 21, 2016 11:20:58 AM
Attachments: invite.ics

Conference call - Brook Mine

more details »

When Thu Jan 21, 2016 3:30pm – 4:30pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/conference-call

Calendar Andrew Kuhlmann

Who
- alan.edwards@wyo.gov - organizer
- Mark Rogaczewski
- BJ Kristiansen
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_96.ics (1375 Bytes) cannot be converted to PDF format.

From:	Mark Rogaczewski
To:	Alan Edwards
Cc:	BJ Kristiansen; Andrew Kuhlmann
Subject:	Re: Invitation: Conference call - Brook Mine @ Thu Jan 21, 2016 3:30pm - 4:30pm (mark.rogaczewski@wyo.gov)
Date:	Thursday, January 21, 2016 11:52:59 AM

Alan,

I will be out of the office and cannot make this call. My schedule is open from 1 - 3 p.m. today.

Mark

On Thu, Jan 21, 2016 at 11:20 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> **Conference call - Brook Mine** **more details »**
>
> When Thu Jan 21, 2016 3:30pm – 4:30pm Mountain Time
>
> Video call https://plus.google.com/hangouts/_/wyo.gov/conference-call
>
> Calendar mark.rogaczewski@wyo.gov
>
> Who
> - alan.edwards@wyo.gov - organizer
> - BJ Kristiansen
> - andrew.kuhlmann@wyo.gov
> - Mark Rogaczewski
>
> Going? **Yes** - **Maybe** - **No** more options »
>
> Invitation from Google Calendar
>
> You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.
>
> To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.
>
> Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Mark Rogaczewski
Cc:	BJ Kristiansen; Andrew Kuhlmann
Subject:	Re: Invitation: Conference call - Brook Mine @ Thu Jan 21, 2016 3:30pm - 4:30pm (mark.rogaczewski@wyo.gov)
Date:	Thursday, January 21, 2016 1:08:27 PM

I have a call starting shortly and then Andrew isn't available until around 3:30. Andrew will be gone tomorrow also so this seems to be about the only time this week to make the call work. I would like to have you join but BJ can probably cover the issue. Alan

On Thu, Jan 21, 2016 at 11:52 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan,
>
> I will be out of the office and cannot make this call. My schedule is open from 1 - 3 p.m. today.
>
> Mark
>
> On Thu, Jan 21, 2016 at 11:20 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>
> > **Conference call - Brook Mine** **more details »**
> >
> > When Thu Jan 21, 2016 3:30pm – 4:30pm Mountain Time
> >
> > Video call https://plus.google.com/hangouts/_/wyo.gov/conference-call
> >
> > Calendar mark.rogaczewski@wyo.gov
> >
> > Who
> > - alan.edwards@wyo.gov - organizer
> > - BJ Kristiansen
> > - andrew.kuhlmann@wyo.gov
> > - Mark Rogaczewski
> >
> > Going? **Yes** - **Maybe** - **No** more options »
> >
> > Invitation from Google Calendar
> >
> > You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.
> >
> > To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.
> >
> > Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.
>
> --

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	Alan Edwards
Cc:	BJ Kristiansen; Andrew Kuhlmann
Subject:	Re: Invitation: Conference call - Brook Mine @ Thu Jan 21, 2016 3:30pm - 4:30pm (mark.rogaczewski@wyo.gov)
Date:	Thursday, January 21, 2016 1:29:22 PM

Alan,

I am fine with BJ providing LQD D3's input as he is most familiar with the application and landowner consent topic. BJ does an excellent job of keeping me up to date on RAMACO topics/discussions.

Thanks,

Mark

On Thu, Jan 21, 2016 at 1:08 PM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> I have a call starting shortly and then Andrew isn't available until around 3:30. Andrew will be gone tomorrow also so this seems to be about the only time this week to make the call work. I would like to have you join but BJ can probably cover the issue. Alan
>
> On Thu, Jan 21, 2016 at 11:52 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Alan,
>>
>> I will be out of the office and cannot make this call. My schedule is open from 1 - 3 p.m. today.
>>
>> Mark
>>
>> On Thu, Jan 21, 2016 at 11:20 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>>
>>> **Conference call - Brook Mine** **more details »**
>>>
>>> When Thu Jan 21, 2016 3:30pm – 4:30pm Mountain Time
>>>
>>> Video call https://plus.google.com/hangouts/_/wyo.gov/conference-call
>>>
>>> Calendar mark.rogaczewski@wyo.gov
>>>
>>> Who
>>> - alan.edwards@wyo.gov - organizer
>>> - BJ Kristiansen
>>> - andrew.kuhlmann@wyo.gov
>>> - Mark Rogaczewski
>>>
>>> Going? **Yes** - **Maybe** - **No** more options »
>>>
>>> Invitation from Google Calendar
>>>
>>> You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.
>>>
>>> To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Andrew Kuhlmann
To:	Mark Rogaczewski; BJ Kristiansen
Cc:	Alan Edwards
Subject:	Re: Invitation: Conference call - Brook Mine @ Thu Jan 21, 2016 3:30pm - 4:30pm (mark.rogaczewski@wyo.gov)
Date:	Thursday, January 21, 2016 2:57:15 PM

Mark and BJ,

Alan asked me to email you both that he will need to cancel the call today and talk on Monday instead.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

On Thu, Jan 21, 2016 at 1:29 PM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan,

I am fine with BJ providing LQD D3's input as he is most familiar with the application and landowner consent topic. BJ does an excellent job of keeping me up to date on RAMACO topics/discussions.

Thanks,

Mark

On Thu, Jan 21, 2016 at 1:08 PM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> I have a call starting shortly and then Andrew isn't available until around 3:30. Andrew will be gone tomorrow also so this seems to be about the only time this week to make the call work. I would like to have you join but BJ can probably cover the issue. Alan
>
> On Thu, Jan 21, 2016 at 11:52 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
>> Alan,
>>
>> I will be out of the office and cannot make this call. My schedule is open from 1 - 3 p.m. today.
>>
>> Mark
>>
>> On Thu, Jan 21, 2016 at 11:20 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>>
>>> **Conference call - Brook Mine** **more details »**
>>>
>>> When Thu Jan 21, 2016 3:30pm – 4:30pm Mountain Time
>>>
>>> Video call https://plus.google.com/hangouts/_/wyo.gov/conference-call
>>>
>>> Calendar mark.rogaczewski@wyo.gov
>>>
>>> Who
>>> - alan.edwards@wyo.gov - organizer
>>> - BJ Kristiansen
>>> - andrew.kuhlmann@wyo.gov
>>> - Mark Rogaczewski
>>>
>>> Going? **Yes** - **Maybe** - **No** more options »
>>>
>>> Invitation from Google Calendar
>>>
>>> You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.
>>>
>>> To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.
>>>
>>> Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.
>>>
>>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Andrew Kuhlmann
Subject:	RE: Invitation: Conference call - Brook Mine @ Thu Jan 21, 2016 3:30pm - 4:30pm (mark.rogaczewski@wyo.gov)
Date:	Thursday, January 21, 2016 3:05:36 PM

Thanks Andrew, we'll be ready on Monday.

-bj

From: Andrew Kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Thursday, January 21, 2016 2:57 PM
To: Mark Rogaczewski <mark.rogaczewski@wyo.gov>; BJ Kristiansen <bj.kristiansen@wyo.gov>
Cc: Alan Edwards <alan.edwards@wyo.gov>
Subject: Re: Invitation: Conference call - Brook Mine @ Thu Jan 21, 2016 3:30pm - 4:30pm (mark.rogaczewski@wyo.gov)

Mark and BJ,

Alan asked me to email you both that he will need to cancel the call today and talk on Monday instead.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue ***Please note the new mailing address**
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue ***Please note the new mailing address**
Cheyenne, WY 82002

307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

On Thu, Jan 21, 2016 at 1:29 PM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan,
>
> I am fine with BJ providing LQD D3's input as he is most familiar with the application and landowner consent topic. BJ does an excellent job of keeping me up to date on RAMACO topics/discussions.
>
> Thanks,
>
> Mark
>
> On Thu, Jan 21, 2016 at 1:08 PM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>
>> I have a call starting shortly and then Andrew isn't available until around 3:30. Andrew will be gone tomorrow also so this seems to be about the only time this week to make the call work. I would like to have you join but BJ can probably cover the issue. Alan
>>
>> On Thu, Jan 21, 2016 at 11:52 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>>
>>> Alan,
>>>
>>> I will be out of the office and cannot make this call. My schedule is open from 1 - 3 p.m. today.
>>>
>>> Mark
>>>
>>> On Thu, Jan 21, 2016 at 11:20 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>>>
>>>> more details »
>>>> **Conference call - Brook Mine**
>>>> When Thu Jan 21, 2016 3:30pm – 4:30pm Mountain Time
>>>> Video call https://plus.google.com/hangouts/_/wyo.gov/conference-call
>>>> Calendar mark.rogaczewski@wyo.gov
>>>> Who
>>>> - alan.edwards@wyo.gov - organizer
>>>> - BJ Kristiansen
>>>> - andrew.kuhlmann@wyo.gov

- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Alan Edwards
To: mark.rogaczewski@wyo.gov; andrew.kuhlmann@wyo.gov; BJ Kristiansen; Alan Edwards
Subject: Invitation: Brook Mine @ Mon Jan 25, 2016 9am - 10am (mark.rogaczewski@wyo.gov)
Date: Friday, January 22, 2016 1:06:36 PM
Attachments: invite.ics

Brook Mine

more details »

If this does not work please let me know what does. Thanks.

When Mon Jan 25, 2016 9am – 10am Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine

Calendar mark.rogaczewski@wyo.gov

Who
- alan.edwards@wyo.gov - organizer
- Mark Rogaczewski
- andrew.kuhlmann@wyo.gov
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_97.ics (1423 Bytes) cannot be converted to PDF format.

From: Alan Edwards
To: bj.kristiansen@wyo.gov; Mark Rogaczewski; andrew.kuhlmann@wyo.gov; Alan Edwards
Subject: Invitation: Brook Mine @ Mon Jan 25, 2016 9am - 10am (bjarne.kristiansen@wyo.gov)
Date: Friday, January 22, 2016 1:06:37 PM
Attachments: invite.ics

Brook Mine

more details »

If this does not work please let me know what does. Thanks.

When Mon Jan 25, 2016 9am – 10am Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine

Calendar bjarne.kristiansen@wyo.gov

Who
- alan.edwards@wyo.gov - organizer
- Mark Rogaczewski
- BJ Kristiansen
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_98.ics (1421 Bytes) cannot be converted to PDF format.

From: Alan Edwards
To: andrew.kuhlmann@wyo.gov; BJ Kristiansen; Mark Rogaczewski; Alan Edwards
Subject: Invitation: Brook Mine @ Mon Jan 25, 2016 9am - 10am (Andrew Kuhlmann)
Date: Friday, January 22, 2016 1:06:39 PM
Attachments: invite.ics

Brook Mine

more details »

If this does not work please let me know what does. Thanks.

When Mon Jan 25, 2016 9am – 10am Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine

Calendar Andrew Kuhlmann

Who
- alan.edwards@wyo.gov - organizer
- BJ Kristiansen
- andrew.kuhlmann@wyo.gov
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_99.ics (1422 Bytes) cannot be converted to PDF format.

From:	Alan Edwards
To:	BJ Kristiansen
Cc:	andrew kuhlmann
Subject:	Re: Brook Mine call
Date:	Monday, January 25, 2016 9:00:11 AM
Attachments:	image001.jpg

Sorry, I just noted you will be in Mark's Office. Andrew will call there.

On Mon, Jan 25, 2016 at 8:52 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Alan,
>
> How do you want to handle the call? I can be in Mark's office for the call, if that would work for you.
>
> -bj
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3
>
> 2100 W. 5th St.
>
> Sheridan, WY 82801
>
> Off: (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	BJ Kristiansen
Cc:	Kim Pandullo; Alan Edwards; Andrew Kuhlmann
Subject:	Re: PRBRC response from LQD on Operator for Brook Mine
Date:	Tuesday, January 26, 2016 8:49:14 AM
Attachments:	image001.jpg

BJ,

Thanks

On Tue, Jan 26, 2016 at 7:39 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Kim,
>
> The attached letter is ready for Alan's signature. This is the response to a letter from the Powder River Basin Resource Council questioning the Brook Mine permit application. Let me know if this is adequate or if you need anything else.
>
> -bj
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3
>
> 2100 W. 5th St.
>
> Sheridan, WY 82801
>
> Off: (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From:	Mark Rogaczewski
To:	BJ Kristiansen
Cc:	Kim Pandullo; Alan Edwards; Andrew Kuhlmann
Subject:	Re: PRBRC response from LQD on Operator for Brook Mine
Date:	Tuesday, January 26, 2016 8:49:15 AM
Attachments:	image001.jpg

BJ,

Thanks

On Tue, Jan 26, 2016 at 7:39 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Kim,
>
> The attached letter is ready for Alan's signature. This is the response to a letter from the Powder River Basin Resource Council questioning the Brook Mine permit application. Let me know if this is adequate or if you need anything else.
>
> -bj
>
> Bj Kristiansen, P.G.
>
> Department of Environmental Quality
>
> Natural Resources Program Principal
>
> Land Quality Division - District 3
>
> 2100 W. 5th St.
>
> Sheridan, WY 82801
>
> Off: (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Todd Parfitt; andrew kuhlmann
Cc:	Kyle Wendtland
Subject:	Brook Mine - Response to Shannon Anderson
Date:	Thursday, January 28, 2016 8:35:28 AM
Attachments:	2016-0125_BrookMinePermit-ltrToShannonAnderson (3).pdf

---

Attached is the response to Shannon Anderson's December 15 letter regarding the Brook mine permit application. Thank you for all your help on the letter and the permit Andrew. It is very much appreciated. Alan

--

Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

DEQ

Matthew H. Mead, Governor

Todd Parfitt, Director

January 25, 2016

Ms. Shannon Anderson
Powder River Basin Resource Council
934 N. Main St.
Sheridan, WY 82801

Dear Ms. Anderson,

The Wyoming Department of Environmental Quality – Land Quality Division (LQD) received your December 15, 2015 letter concerning the Brook Mine permit application on December 16, 2015. The public is encouraged to contact LQD with their comments and we appreciate your apprising us of your reservations about the application's designation of an operator for the Brook Mine.

The application indicates that the Brook Mining Company is applying to be both the permit owner and the licensed operator of the permit. This is a common occurrence and is consistent with LQD regulations and past permit applications. The owner of a mining permit and the operator of the mine may or may not be the same entity, as outlined in the Wyoming Environmental Quality Act, § 35-11-103(e)(ix) where the definition of "Operator" allows for, but does not demand, such dichotomies of responsibility. Additionally, mining companies, whether they have applied for coal or non-coal operations, do not generally engage in the permitting process with an operating staff hired and on the payroll prior to the issuance of a permit. It would often be fiscally imprudent for a mining company to do so and would likely be considered inappropriate by a corporate board of directors tasked with the oversight of a potential mine still seeking permit approval.

Therefore, the practice being followed by the Brook Mine as a sole proprietor and operator of the mine is appropriate at this time. I hope this addresses your concerns. LQD will continue to assess the technical adequacy of the Brook Mine permit application. Once LQD completes that review, a notice published in the local newspaper will solicit for public comments on the permit application. You are, of course, welcome to participate in that public comment process.

Sincerely,

Alan Edwards

Alan Edwards
Deputy Director

200 West 17th Street · Cheyenne, WY 82002 · http://deq.wyoming.gov · Fax (307)635-1784

ADMIN/OUTREACH	ABANDONED MINES	AIR QUALITY	INDUSTRIAL SITING	LAND QUALITY	SOLID & HAZ. WASTE	WATER QUALITY
(307) 777-7937	(307) 777-6145	(307) 777-7391	(307) 777-7369	(307) 777-7756	(307) 777-7752	(307) 777-7781

From:	BJ Kristiansen
To:	Andrew Kuhlmann
Cc:	Mark Rogaczewski; Kyle Wendtland; Alan Edwards
Subject:	Brook Mine Round 4 responses
Date:	Thursday, February 04, 2016 9:04:25 AM

Andrew,

RAMACO has been contacting me about the Round 4 responses for the Brook Mine permit application. We will be meeting with them on Monday morning at 9:00 to determine what direction they need to take in order to move the permit application forward. Since LQD received the Holland and Hart response yesterday afternoon, the 30 day clock has started, putting the deadline on Friday, March 4th. Please contact us at an appropriate time to inform us about the AG opinion or guidance on the surface use issues. We will need that to move forward with our recommendations to RAMACO. They will either be requesting a hearing with the EQC or will be modifying the permit boundary to remove BHC and Padlock acreages. I look forward to hearing from you.

-bj

--
Bj Kristiansen, P.G.
Project Geologist
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

"The trouble with quotes on the Internet is you never know if they are genuine." - Abraham Lincoln

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Hal Corbett
To:	andrew.kuhlmann@wyo.gov
Cc:	Trey Patterson; John Heyneman; Mistee Elliott
Subject:	Padlock Ranch Company/Ramaco Mine Permit Application
Date:	Friday, February 05, 2016 3:49:38 PM

Andrew-

As you will recall, I represent Padlock Ranch Company ("Padlock"), which owns approximately 1,400 acres of land within Phase I of Ramaco Wyoming, LLC's ("Ramaco") proposed mine permit area in Sheridan County, Wyoming. For a number of reasons, some of which I described to you in my letter of December 14, 2015, Padlock has not provided surface owner consent to mining for the Ramaco permit application.

Our client has just been advised by Ramaco's engineering firm that Ramaco's "revised mine plan and reclamation plan have been deemed technically complete and in compliance with the Wyoming Environmental Quality Act by WDEQ/LDQ." As a result, Ramaco has again requested that Padlock provide surface owner consent to mining.

Frankly, we have a hard time envisioning how Ramaco's mine permit application can possibly be considered to be in compliance with the Wyoming Environmental Quality Act ("EQA") when that most basic of EQA provisions, the requirement of surface owner consent to mining, has not been complied with by Ramaco, not only as to Padlock's deeded lands, but also as to deeded land owned by other parties.

I would appreciate it if you could give me a call or a return email and let me know the actual current status of the Ramaco mine permit application, and what you see as the schedule of permit application activities going forward.

Thanks for your attention to this matter. I look forward to hearing from you.

Hal

Haultain E. Corbett
Lonabaugh and Riggs, LLP
P.O. Drawer 5059
50 E. Loucks Street, Suite 110
Sheridan, WY 82801
Phone: (307) 672-7444

Fax: (307) 672-2230
Hal@Lonabaugh.com

CONFIDENTIALITY NOTICE: This e-mail is intended only for the person to whom it is addressed and may contain information that is privileged or confidential. Distribution of this e-mail or the information in it by anyone other than the intended recipient is prohibited. If you have received this e-mail in error, please advise the sender and delete the e-mail from your computer. Thank you.

From:	BJ Kristiansen
To:	Andrew Kuhlmann; Alan Edwards; Kyle Wendtland; Mark Rogaczewski
Subject:	Fwd: policy memorandum
Date:	Tuesday, February 09, 2016 10:18:36 AM
Attachments:	Governor Matt Mead 2816.pdf image001.jpg

Gentlemen,

I just received this letter from Jeff Baron of WWC Engineering. It was generated by Ramaco and has been mailed to the Governor's office. There are some misrepresentations and misstatements in the narrative that overemphasize DEQ involvement with the Ramaco surface ownership decisions and land trespass in general. We need to examine the document for the informational value it contains and assess possible avenues of response.

-Bj Kristiansen, PG
Natural Resources Program Principal
LQD - District III

---------- Forwarded message ----------
From: **Jeff Barron** <jbarron@wwcengineering.com>
Date: Tue, Feb 9, 2016 at 8:11 AM
Subject: policy memorandum
To: BJ Kristiansen <bj.kristiansen@wyo.gov>

BJ,

Find attached the policy memorandum.

Jeff Barron, P.E. | Project Manager

1849 Terra Avenue | Sheridan, WY 82801

Tel 307-672-0761 | Cell 307-751-1427

www.wwcengineering.com

--
Bj Kristiansen, P.G.
Project Geologist
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

RAMACO

February 8, 2016

Governor Matthew H. Mead
Office of the Governor
State of Wyoming
2323 Carey Ave.
Cheyenne, Wyoming 82801

Re: Policy Implications of Attorney General's Interpretation on Form 8 Written Consent Requirements

Dear Governor Mead,

I am writing to you again, frankly at the prompting of your own DEQ staff. Ramaco's permit group, in the course of a normal meeting last Friday was made aware of deep reservations, which the local DEQ has on the implications of the Attorney General's new interpretation of the consent requirements to mining permit issuance, amendment and modification in Wyoming.

The law of "unintended consequences" is that this new interpretation of the Attorney General, by unintended design, will provide a "Trojan horse" that could be used by those opposed to mining in Wyoming (or those who seek a financial windfall). The DEQ staff feels that it will potentially be used to stop or delay both existing, as well as proposed new mines. Instead of "fighting for coal" the State will become an unwitting adversary delivering "friendly fire" to those mining interests attempting to operate in the State.

Since you have an overwhelming number of matters before you, I felt it incumbent to elevate these concerns of the DEQ directly to you. I have also attached a policy paper prepared for you and your staff to review and consider.

Basically, the prior practice of the DEQ was to allow a deed containing a surface mining reservation to be used in lieu of a new written Form 8 consent from a surface landowner (who had already provided such consent in the deed). This applied to both new permits, as well as modifications to existing permits.

When confronted by our counsel last week with this prior practice, the Attorney General responded that in his view the DEQ had previously and mistakenly acted in violation of the law. He further stated that any contrary advice rendered by the Attorney General's predecessors was a mistake. The outshot is now that a surface owner's prior consent would basically be invalidated and a new written consent would be required.

I will not detail here all of the scenarios and negative implications, which this new interpretation, could trigger. I would refer you to the policy paper as a good start. I would further add, as stated, that your own DEQ staff in a meeting last Friday expressed deep concern on this approach. They felt that under this interpretation, a new written Form 8 consent from a surface owner could be

required, both when there has been a new surface land transfer, or whenever an existing permit required modification, either major or minor. This would be the case, even when a surface owner had previously provided such consent in the past.

This opens a Pandora's box, which could and would be used to impede, delay or even stop new or existing mining in Wyoming. It could also be used to impede both new or modified mining permits to dramatic effect.

I would urge you to carefully consider that the Attorney General is perhaps unwittingly creating a potentially untenable hurtle for Wyoming mining interests. I say this not only on behalf of our narrow interest in seeing the Brook Mine permit to be allowed for public comment, but also for the rest of the mining industry. Indeed, my impetus in writing this letter was the concerns expressed in the last few days by your own DEQ staff as to this new interpretation's impact on Wyoming mining generally.

You have rightly positioned yourself as a far-sighted champion for the Wyoming coal industry. If the implications of the position of your Attorney General are not properly judged and considered, this may create a dangerous new precedent, which may be used against that industry.

Cordially yours,
Ramaco, LLC

Randall W. Atkins
Chief Executive Officer

Cc: Kari Jo Gray
Honorable Rosie Berger

1101 Sugarview Dr., Suite 201, Sheridan, Wyoming 82801

DEPARTMENT OF ENVIRONMENTAL QUALITY'S

FAILURE TO RECOGNIZE CONTRACTUAL LANDOWNER CONSENT:

SUMMARY OF POTENTIAL IMPACTS

Ramaco Wyoming Coal, LLC has been advised by the Wyoming Attorney General's Office (AG), that it will deem Brook's mine permit application deficient because of a failure to obtain written landowner consent approving its mine and reclamation plan. The AG has concluded that Brook's reliance on its reserved surface rights in the deed to purchase the property, while arguably sufficient to grant surface access for mining, does not satisfy the requirements of the Environmental Quality Act.[1]

Within the past week, members of DEQ's local staff have expressed concerns directly to Ramaco's permit team criticizing the potentially far-reaching negative impact of the DEQ's apparently "new policy". Specifically, in addition to the severe impact DEQ's findings could cause to Brook Mine's project[2], there are significant and far-reaching negative consequences that could affect hundreds of existing and future mining projects.

This policy paper is being presented so that the appropriate arms of the Wyoming State government can consider the negative "unintended consequences" of the AG's new policy interpretation. DEQ and the AG have made the perfect, the enemy of the good. This new policy could also create a "Trojan Horse" to be used by interests opposed to mining to either delay or potentially stop both new or existing mining in Wyoming.

As set forth in Ramaco's previous responses to DEQ and AG Comments, Brook strongly disagrees with the AG's new interpretation and distinct shift in policy, which would now impose the requirement of a new written landowner consent. This shift is contrary to the DEQ's prior practice in approving both coal and other mining permits and permit amendments, as well as accepted Wyoming case law. By virtue of its dominant mineral estate and the broad, unambiguous surface use reservation, additional surface owner consent to the mine and reclamation plans is neither necessary nor appropriate.

---

[1] Specifically, the AG finds that Wyo. Stat. § 35-11-406(b)(xi)-(xii) requires specific written landowner consent to the proposed mine plan and the proposed reclamation plan even when the surface owner does not have the right to exclude the owner of the mineral estate from the property.

[2] In exchange for their consent, the two non-consenting surface owners have demanded compensation far in excess of the land value at issue. These demands could render Brook's project uneconomical.

The following is a summary of these potential consequences:

1. Landowner Consent Would Be Required for Existing Permit Modifications

As the AG explained to Brook, DEQ will now require proof by an executed Form 8, that current surface owners consent to both a mine plan and reclamation plan submitted for permit review. When confronted with evidence of DEQ's historic practice of allowing a deed or other legally binding document to be submitted in lieu of specific surface owner consent, the AG responded that the DEQ had previously mistakenly acted in violation of the law and that any contrary advice from the AG's predecessors was a mistake.

Thus, under this new interpretation, both new permit applications as well as modifications of existing permits must include an explicit surface owner consent on DEQ's official Form 8. If the DEQ now interprets the Environmental Quality Act as always requiring a new written consent, even if other documents (such as a deed) demonstrate some form of previous consent, then permit modification requests will require new consent regardless of the scope of the modification.

Big or small, any request to change an existing permit would open the door for a surface owner to extort new payments for consent. Indeed, this is the same dilemma, which Ramaco faces in being asked to pay tens of millions of dollars in return for a new consent with landowners already subject to a surface mining reservation.

It might also be noted, that under this new approach any permit modification on surface and mineral lands leased from the BLM would require the Federal government to provide a new written consent. Such consent would potentially involve political and environmental interests, which do not want mining to occur in Wyoming.

Even on its face, this policy change presents significant problems. If surface owners are empowered to oppose mining projects despite the existence of enforceable surface access rights in deeds or other instruments, then there is no limit on how demands could escalate. With no way to enforce pre-determined access rights, surface owners could arbitrarily withhold consent to the mine and reclamation plans.

DEQ's policy shift would significantly increase the risk for a company currently engaged in mining in Wyoming to modify its permit. Given the ever-increasing risks that mining companies face, adding new risk makes no regulatory or economic sense. If a landowner refuses to consent, then a potential expansion of a job and revenue-creating project would be lost.

2. Requirement for New Consent from a Surface Transferee

If the AG's new interpretation of the Form 8 consent requirement is applied then there are a variety of situations where surface owners could impede or stop existing or proposed mining in Wyoming. Examples would include:

- If a surface owner passes away and does not perpetuate his/her consent via a will or other document (that can be inserted into the permit) then a mining operator would be required to seek a new consent from the new estate holder for any permit amendments or project

modifications, i.e. the prior consent will neutered of the prior rights it conveyed.

- If the surface of an existing operation is sold either in whole or part, then consent must be requested of the new landowners if there is any permit modification.
- Environmental, political or other groups intent on delaying, impeding or even stopping mining in Wyoming, could use this new policy to suggest to landowners that they have not previously given consent on any permit changes that have occurred since their original consent. This could be applied to wreak havoc on existing mining operations throughout Wyoming.
- Reclaimed surface lands sold without full bond release would require consent of the new owner to the mine and reclamation plan, in the event of a modification or amendment.
- The public comment period will no longer be utilized as the forum for previously consenting surface owners to raise objections to their prior consent.

3. Re-evaluation of Permit Application Completeness

Presently, the permit application process is designed to allow on-going plan modifications aimed at developing a project, potentially over decades, that takes into account potential impacts to all stakeholders. It is a dynamic process involving numerous changes to accommodate the needs of all involved. As an initial part of that process, DEQ makes a determination whether the permit application is complete.

Historically, an application would be deemed complete with either a Form 8 Surface Owner Consent *or* some other document showing that surface owner consent was not required (i.e. a deed in lieu of consent). Presently once a completeness determination was made and the application was reviewed for technical adequacy, the application could be changed or modified *without* additional or new surface owner consent.

The AG's new policy shift could grind this process to a halt. By requiring a Form 8 no matter the circumstances, DEQ cannot deem an application complete until the applicant gets that Form 8. This would delay the technical review process indefinitely, again increasing the risk a company faces for trying to do business in Wyoming.

4. Unlimited Exposure for Existing Mine Permits

As Ramaco discusses in its Round 4 Comment Response, the DEQ has a long-history of accepting other documents—like property deeds—in lieu of a Form 8 Surface Owner Consent. The AG's 180 degree change calls into question the validity of potentially all prior permits or modifications and will likely lead to litigation over whether DEQ had the authority to issue them.

Put simply, all existing mine permits or modifications without a Form 8 would be subject to litigation and attacks claiming the permits were unlawfully issued. That litigation would affect more than just coal companies and would include other mineral interests. Ramaco's Round 4 Comment Response shows that those existing permits span several mining industries—all potentially subject to attack from surface owners or environmentalist groups interested in stopping all mineral extraction in the state.

With Wyoming's mineral industry reeling from increased federal regulation, bankruptcies and political and environmental groups looking to shut down a vital part of Wyoming's economy, the DEQ's policy shift offers new means to accomplish that goal. Even if mining companies can defend their permits, the costs and delays of that litigation will burden those companies and ultimately the citizens of Wyoming. Again, it will increase the risk for doing business in Wyoming without any real benefit to the State. Ultimately, Wyoming stands to lose if additional obstacles are forced upon mines. The new policy is a Trojan horse in disquise.

5. Unlawful Taking of Mineral Interests

The change in policy contemplated by DEQ in this case is nothing short of a fundamental shift in the balance between the surface estate and the mineral estate. Without exception, the mineral estate has always been treated as the dominant ownership right. A party who owns minerals has always enjoyed the right to extract said minerals, and has owned the dominant right to use whatever surface rights were reasonably necessary. Even with the advent of the Environmental Quality Act, the mineral estate retained its position as the dominant right, though subject to some additional considerations of the potential impact on a surface owner.

Under DEQ's new interpretation of the Act, the surface owner has suddenly been granted a nearly unlimited right to stand in the way of mineral extraction. This certainly goes well beyond the scope of Act's limited purpose and places the surface owner in the position of the dominant estate.

DEQ's decision to require surface owner consent to mine and reclamation plans, even when the surface owner could not otherwise prevent the mineral owner from extracting its minerals, could and will completely shift the economic balance in favor of the surface owner. As is the case for Brook Mine, surface owners could insist on unrealistic compensation or other prohibitive terms, unreasonably withholding consent and blocking mineral extraction entirely.

Thus, the AG's interpretation could be used to prevent an owner from extracting and developing their valuable minerals, amounting to an unlawful taking of the minerals without just compensation. Such a taking is in direct violation of Article I, Section 32 of the Wyoming Constitution. The only logical resolution of wrongful takings would be litigation against the surface owner and against the State, for wrongfully authorizing a mineral taking. As the State would represent the "deep pockets" in most takings litigation, the Attorney General's interpretation puts the State in significant potential exposure.

8464313_3

WWC
ENGINEERING

From:	Alan Edwards
To:	Todd Parfitt
Cc:	andrew kuhlmann
Subject:	Fwd: policy memorandum
Date:	Tuesday, February 09, 2016 8:09:30 PM
Attachments:	Governor Matt Mead 2816.pdf image001.jpg

Things to consider re: Brook Mine as it relates to Ramaco letter:

1. Ramaco has indicated to the Sheridan DEQ staff that they would like to discuss options for adjusting their permit to satisfy the permit requirements. One of the options would be to reduce the area requested for the permit to only include the land owned by Ramaco. DEQ is open to discussing other alternatives but further details are needed to address possible alternatives. This door has not been closed.
2. Concern was raised that only Form 8 would be acceptable to satisfy the requirements of adjudication and that they were told that deeds were not acceptable. This is not our position nor is it correct. There are other options available such as a federal lease if it is federal lands, a contract or a deed. For contracts or deeds the deciding factor is how those are worded and the conditions placed upon them. In the case of Brook Mine, the determination was not that a deed is not acceptable but that this deed and the provisions in the deed do not adequately satisfy the surface access requirements. DEQ has not denied the permit application but rather is waiting to see if additional information is available to further determine surface access.

Alan
---------- Forwarded message ----------
From: **BJ Kristiansen** <bj.kristiansen@wyo.gov>
Date: Tue, Feb 9, 2016 at 10:18 AM
Subject: Fwd: policy memorandum
To: Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>, Kyle Wendtland <kyle.wendtland@wyo.gov>, Mark Rogaczewski <mark.rogaczewski@wyo.gov>

Gentlemen,

I just received this letter from Jeff Baron of WWC Engineering. It was generated by Ramaco and has been mailed to the Governor's office. There are some misrepresentations and misstatements in the narrative that overemphasize DEQ involvement with the Ramaco surface ownership decisions and land trespass in general. We need to examine the document for the informational value it contains and assess possible avenues of response.

-Bj Kristiansen, PG
Natural Resources Program Principal
LQD - District III

---------- Forwarded message ----------
From: **Jeff Barron** <jbarron@wwcengineering.com>

Date: Tue, Feb 9, 2016 at 8:11 AM
Subject: policy memorandum
To: BJ Kristiansen <bj.kristiansen@wyo.gov>

BJ,

Find attached the policy memorandum.

Jeff Barron, P.E. | Project Manager

1849 Terra Avenue | Sheridan, WY 82801

Tel 307-672-0761 | Cell 307-751-1427

www.wwcengineering.com

--
Bj Kristiansen, P.G.
Project Geologist
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands

200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

RAMACO

February 8, 2016

Governor Matthew H. Mead
Office of the Governor
State of Wyoming
2323 Carey Ave.
Cheyenne, Wyoming 82801

Re: Policy Implications of Attorney General's Interpretation on Form 8 Written Consent Requirements

Dear Governor Mead,

I am writing to you again, frankly at the prompting of your own DEQ staff. Ramaco's permit group, in the course of a normal meeting last Friday was made aware of deep reservations, which the local DEQ has on the implications of the Attorney General's new interpretation of the consent requirements to mining permit issuance, amendment and modification in Wyoming.

The law of "unintended consequences" is that this new interpretation of the Attorney General, by unintended design, will provide a "Trojan horse" that could be used by those opposed to mining in Wyoming (or those who seek a financial windfall). The DEQ staff feels that it will potentially be used to stop or delay both existing, as well as proposed new mines. Instead of "fighting for coal" the State will become an unwitting adversary delivering "friendly fire" to those mining interests attempting to operate in the State.

Since you have an overwhelming number of matters before you, I felt it incumbent to elevate these concerns of the DEQ directly to you. I have also attached a policy paper prepared for you and your staff to review and consider.

Basically, the prior practice of the DEQ was to allow a deed containing a surface mining reservation to be used in lieu of a new written Form 8 consent from a surface landowner (who had already provided such consent in the deed). This applied to both new permits, as well as modifications to existing permits.

When confronted by our counsel last week with this prior practice, the Attorney General responded that in his view the DEQ had previously and mistakenly acted in violation of the law. He further stated that any contrary advice rendered by the Attorney General's predecessors was a mistake. The outshot is now that a surface owner's prior consent would basically be invalidated and a new written consent would be required.

I will not detail here all of the scenarios and negative implications, which this new interpretation, could trigger. I would refer you to the policy paper as a good start. I would further add, as stated, that your own DEQ staff in a meeting last Friday expressed deep concern on this approach. They felt that under this interpretation, a new written Form 8 consent from a surface owner could be

required, both when there has been a new surface land transfer, or whenever an existing permit required modification, either major or minor. This would be the case, even when a surface owner had previously provided such consent in the past.

This opens a Pandora's box, which could and would be used to impede, delay or even stop new or existing mining in Wyoming. It could also be used to impede both new or modified mining permits to dramatic effect.

I would urge you to carefully consider that the Attorney General is perhaps unwittingly creating a potentially untenable hurtle for Wyoming mining interests. I say this not only on behalf of our narrow interest in seeing the Brook Mine permit to be allowed for public comment, but also for the rest of the mining industry. Indeed, my impetus in writing this letter was the concerns expressed in the last few days by your own DEQ staff as to this new interpretation's impact on Wyoming mining generally.

You have rightly positioned yourself as a far-sighted champion for the Wyoming coal industry. If the implications of the position of your Attorney General are not properly judged and considered, this may create a dangerous new precedent, which may be used against that industry.

Cordially yours,
Ramaco, LLC

Randall W. Atkins
Chief Executive Officer

Cc: Kari Jo Gray
Honorable Rosie Berger

1101 Sugarview Dr., Suite 201, Sheridan, Wyoming 82801

DEPARTMENT OF ENVIRONMENTAL QUALITY'S

FAILURE TO RECOGNIZE CONTRACTUAL LANDOWNER CONSENT:

SUMMARY OF POTENTIAL IMPACTS

Ramaco Wyoming Coal, LLC has been advised by the Wyoming Attorney General's Office (AG), that it will deem Brook's mine permit application deficient because of a failure to obtain written landowner consent approving its mine and reclamation plan. The AG has concluded that Brook's reliance on its reserved surface rights in the deed to purchase the property, while arguably sufficient to grant surface access for mining, does not satisfy the requirements of the Environmental Quality Act.[1]

Within the past week, members of DEQ's local staff have expressed concerns directly to Ramaco's permit team criticizing the potentially far-reaching negative impact of the DEQ's apparently "new policy". Specifically, in addition to the severe impact DEQ's findings could cause to Brook Mine's project[2], there are significant and far-reaching negative consequences that could affect hundreds of existing and future mining projects.

This policy paper is being presented so that the appropriate arms of the Wyoming State government can consider the negative "unintended consequences" of the AG's new policy interpretation. DEQ and the AG have made the perfect, the enemy of the good. This new policy could also create a "Trojan Horse" to be used by interests opposed to mining to either delay or potentially stop both new or existing mining in Wyoming.

As set forth in Ramaco's previous responses to DEQ and AG Comments, Brook strongly disagrees with the AG's new interpretation and distinct shift in policy, which would now impose the requirement of a new written landowner consent. This shift is contrary to the DEQ's prior practice in approving both coal and other mining permits and permit amendments, as well as accepted Wyoming case law. By virtue of its dominant mineral estate and the broad, unambiguous surface use reservation, additional surface owner consent to the mine and reclamation plans is neither necessary nor appropriate.

---

[1] Specifically, the AG finds that Wyo. Stat. § 35-11-406(b)(xi)-(xii) requires specific written landowner consent to the proposed mine plan and the proposed reclamation plan even when the surface owner does not have the right to exclude the owner of the mineral estate from the property.

[2] In exchange for their consent, the two non-consenting surface owners have demanded compensation far in excess of the land value at issue. These demands could render Brook's project uneconomical.

The following is a summary of these potential consequences:

1. Landowner Consent Would Be Required for Existing Permit Modifications

As the AG explained to Brook, DEQ will now require proof by an executed Form 8, that current surface owners consent to both a mine plan and reclamation plan submitted for permit review. When confronted with evidence of DEQ's historic practice of allowing a deed or other legally binding document to be submitted in lieu of specific surface owner consent, the AG responded that the DEQ had previously mistakenly acted in violation of the law and that any contrary advice from the AG's predecessors was a mistake.

Thus, under this new interpretation, both new permit applications as well as modifications of existing permits must include an explicit surface owner consent on DEQ's official Form 8. If the DEQ now interprets the Environmental Quality Act as always requiring a new written consent, even if other documents (such as a deed) demonstrate some form of previous consent, then permit modification requests will require new consent regardless of the scope of the modification.

Big or small, any request to change an existing permit would open the door for a surface owner to extort new payments for consent. Indeed, this is the same dilemma, which Ramaco faces in being asked to pay tens of millions of dollars in return for a new consent with landowners already subject to a surface mining reservation.

It might also be noted, that under this new approach any permit modification on surface and mineral lands leased from the BLM would require the Federal government to provide a new written consent. Such consent would potentially involve political and environmental interests, which do not want mining to occur in Wyoming.

Even on its face, this policy change presents significant problems. If surface owners are empowered to oppose mining projects despite the existence of enforceable surface access rights in deeds or other instruments, then there is no limit on how demands could escalate. With no way to enforce pre-determined access rights, surface owners could arbitrarily withhold consent to the mine and reclamation plans.

DEQ's policy shift would significantly increase the risk for a company currently engaged in mining in Wyoming to modify its permit. Given the ever-increasing risks that mining companies face, adding new risk makes no regulatory or economic sense. If a landowner refuses to consent, then a potential expansion of a job and revenue-creating project would be lost.

2. Requirement for New Consent from a Surface Transferee

If the AG's new interpretation of the Form 8 consent requirement is applied then there are a variety of situations where surface owners could impede or stop existing or proposed mining in Wyoming. Examples would include:

- If a surface owner passes away and does not perpetuate his/her consent via a will or other document (that can be inserted into the permit) then a mining operator would be required to seek a new consent from the new estate holder for any permit amendments or project

modifications, i.e. the prior consent will neutered of the prior rights it conveyed.

- If the surface of an existing operation is sold either in whole or part, then consent must be requested of the new landowners if there is any permit modification.
- Environmental, political or other groups intent on delaying, impeding or even stopping mining in Wyoming, could use this new policy to suggest to landowners that they have not previously given consent on any permit changes that have occurred since their original consent. This could be applied to wreak havoc on existing mining operations throughout Wyoming.
- Reclaimed surface lands sold without full bond release would require consent of the new owner to the mine and reclamation plan, in the event of a modification or amendment.
- The public comment period will no longer be utilized as the forum for previously consenting surface owners to raise objections to their prior consent.

3. Re-evaluation of Permit Application Completeness

Presently, the permit application process is designed to allow on-going plan modifications aimed at developing a project, potentially over decades, that takes into account potential impacts to all stakeholders. It is a dynamic process involving numerous changes to accommodate the needs of all involved. As an initial part of that process, DEQ makes a determination whether the permit application is complete.

Historically, an application would be deemed complete with either a Form 8 Surface Owner Consent *or* some other document showing that surface owner consent was not required (i.e. a deed in lieu of consent). Presently once a completeness determination was made and the application was reviewed for technical adequacy, the application could be changed or modified *without* additional or new surface owner consent.

The AG's new policy shift could grind this process to a halt. By requiring a Form 8 no matter the circumstances, DEQ cannot deem an application complete until the applicant gets that Form 8. This would delay the technical review process indefinitely, again increasing the risk a company faces for trying to do business in Wyoming.

4. Unlimited Exposure for Existing Mine Permits

As Ramaco discusses in its Round 4 Comment Response, the DEQ has a long-history of accepting other documents—like property deeds—in lieu of a Form 8 Surface Owner Consent. The AG's 180 degree change calls into question the validity of potentially all prior permits or modifications and will likely lead to litigation over whether DEQ had the authority to issue them.

Put simply, all existing mine permits or modifications without a Form 8 would be subject to litigation and attacks claiming the permits were unlawfully issued. That litigation would affect more than just coal companies and would include other mineral interests. Ramaco's Round 4 Comment Response shows that those existing permits span several mining industries—all potentially subject to attack from surface owners or environmentalist groups interested in stopping all mineral extraction in the state.

With Wyoming's mineral industry reeling from increased federal regulation, bankruptcies and political and environmental groups looking to shut down a vital part of Wyoming's economy, the DEQ's policy shift offers new means to accomplish that goal. Even if mining companies can defend their permits, the costs and delays of that litigation will burden those companies and ultimately the citizens of Wyoming. Again, it will increase the risk for doing business in Wyoming without any real benefit to the State. Ultimately, Wyoming stands to lose if additional obstacles are forced upon mines. The new policy is a Trojan horse in disquise.

5. Unlawful Taking of Mineral Interests

The change in policy contemplated by DEQ in this case is nothing short of a fundamental shift in the balance between the surface estate and the mineral estate. Without exception, the mineral estate has always been treated as the dominant ownership right. A party who owns minerals has always enjoyed the right to extract said minerals, and has owned the dominant right to use whatever surface rights were reasonably necessary. Even with the advent of the Environmental Quality Act, the mineral estate retained its position as the dominant right, though subject to some additional considerations of the potential impact on a surface owner.

Under DEQ's new interpretation of the Act, the surface owner has suddenly been granted a nearly unlimited right to stand in the way of mineral extraction. This certainly goes well beyond the scope of Act's limited purpose and places the surface owner in the position of the dominant estate.

DEQ's decision to require surface owner consent to mine and reclamation plans, even when the surface owner could not otherwise prevent the mineral owner from extracting its minerals, could and will completely shift the economic balance in favor of the surface owner. As is the case for Brook Mine, surface owners could insist on unrealistic compensation or other prohibitive terms, unreasonably withholding consent and blocking mineral extraction entirely.

Thus, the AG's interpretation could be used to prevent an owner from extracting and developing their valuable minerals, amounting to an unlawful taking of the minerals without just compensation. Such a taking is in direct violation of Article I, Section 32 of the Wyoming Constitution. The only logical resolution of wrongful takings would be litigation against the surface owner and against the State, for wrongfully authorizing a mineral taking. As the State would represent the "deep pockets" in most takings litigation, the Attorney General's interpretation puts the State in significant potential exposure.

8464313_3

WWC
ENGINEERING

From: Todd Parfitt
To: Alan Edwards
Subject: Re: policy memorandum
Date: Tuesday, February 09, 2016 9:16:42 PM
Attachments: image001.jpg

---

thanks alan

On Tue, Feb 9, 2016 at 8:09 PM, Alan Edwards <alan.edwards@wyo.gov> wrote:

Things to consider re: Brook Mine as it relates to Ramaco letter:

1. Ramaco has indicated to the Sheridan DEQ staff that they would like to discuss options for adjusting their permit to satisfy the permit requirements. One of the options would be to reduce the area requested for the permit to only include the land owned by Ramaco. DEQ is open to discussing other alternatives but further details are needed to address possible alternatives. This door has not been closed.
2. Concern was raised that only Form 8 would be acceptable to satisfy the requirements of adjudication and that they were told that deeds were not acceptable. This is not our position nor is it correct. There are other options available such as a federal lease if it is federal lands, a contract or a deed. For contracts or deeds the deciding factor is how those are worded and the conditions placed upon them. In the case of Brook Mine, the determination was not that a deed is not acceptable but that this deed and the provisions in the deed do not adequately satisfy the surface access requirements. DEQ has not denied the permit application but rather is waiting to see if additional information is available to further determine surface access.

Alan
---------- Forwarded message ----------
From: **BJ Kristiansen** <bj.kristiansen@wyo.gov>
Date: Tue, Feb 9, 2016 at 10:18 AM
Subject: Fwd: policy memorandum
To: Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>, Kyle Wendtland <kyle.wendtland@wyo.gov>, Mark Rogaczewski <mark.rogaczewski@wyo.gov>

Gentlemen,

I just received this letter from Jeff Baron of WWC Engineering. It was generated by Ramaco and has been mailed to the Governor's office. There are some misrepresentations and misstatements in the narrative that overemphasize DEQ involvement with the Ramaco surface ownership decisions and land trespass in general. We need to examine the document for the informational value it contains and assess possible avenues of response.

-Bj Kristiansen, PG
Natural Resources Program Principal
LQD - District III

---------- Forwarded message ----------

From: **Jeff Barron** <jbarron@wwcengineering.com>
Date: Tue, Feb 9, 2016 at 8:11 AM
Subject: policy memorandum
To: BJ Kristiansen <bj.kristiansen@wyo.gov>

BJ,

Find attached the policy memorandum.

Jeff Barron, P.E. | Project Manager

1849 Terra Avenue | Sheridan, WY 82801

Tel 307-672-0761 | Cell 307-751-1427

www.wwcengineering.com

--
Bj Kristiansen, P.G.
Project Geologist
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director

Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Todd Parfitt
Director
Department of Environmental Quality
122 W. 25th Street
Herschler Building, 4W
Cheyenne, Wyoming 82002
307-777-7937
todd.parfitt@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

WWC
ENGINEERING

From:	Alan Edwards
To:	andrew kuhlmann; Mark Rogaczewski; BJ Kristiansen; Kyle Wendtland
Subject:	Brook Mining
Date:	Wednesday, February 10, 2016 4:47:16 PM

I would like to have a 30 minute, no more, conference call tomorrow to discuss the issues raised in the letter from Ramaco. Mark, I would appreciate if you would make the arrangements. Thanks.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	Alan Edwards
Cc:	andrew kuhlmann; BJ Kristiansen; Kyle Wendtland
Subject:	Re: Brook Mining
Date:	Thursday, February 11, 2016 5:40:44 AM

Alan,

I am traveling to Casper today for the Coal Work Group meeting and OSM oversight meeting. I am available tomorrow and can join/arrange a call then.

Sorry for any inconvenience.

Mark

On Wed, Feb 10, 2016 at 4:47 PM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> I would like to have a 30 minute, no more, conference call tomorrow to discuss the issues raised in the letter from Ramaco. Mark, I would appreciate if you would make the arrangements. Thanks.
>
> Alan
>
> --
> Alan Edwards
> Deputy Director
> Administrator, Abandoned Mine Lands
> 200 West 17th Street
> Cheyenne, Wyoming 82002
> Office: 307-777-7062
> Alan.Edwards@wyo.gov
>
> PLEASE NOTE CHANGE IN ADDRESS
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

From: Alan Edwards
To: Mark Rogaczewski
Cc: andrew kuhlmann; BJ Kristiansen; Kyle Wendtland
Subject: Re: Brook Mining
Date: Thursday, February 11, 2016 7:11:54 AM

Tomorrow would work. I have a call from 9-10

Sent from my iPhone

On Feb 11, 2016, at 5:40 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan,
>
> I am traveling to Casper today for the Coal Work Group meeting and OSM oversight meeting. I am available tomorrow and can join/arrange a call then.
>
> Sorry for any inconvenience.
>
> Mark
>
> On Wed, Feb 10, 2016 at 4:47 PM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>
> > I would like to have a 30 minute, no more, conference call tomorrow to discuss the issues raised in the letter from Ramaco. Mark, I would appreciate if you would make the arrangements. Thanks.
> >
> > Alan
> >
> > --
> > Alan Edwards
> > Deputy Director
> > Administrator, Abandoned Mine Lands
> > 200 West 17th Street
> > Cheyenne, Wyoming 82002
> > Office: 307-777-7062
> > Alan.Edwards@wyo.gov
> >
> > PLEASE NOTE CHANGE IN ADDRESS
> >
> > E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.
>
> --
> Mark Rogaczewski

Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	alan.edwards@wyo.gov; andrew.kuhlmann@wyo.gov; BJ Kristiansen; kyle.wendtland@wyo.gov; Mark Rogaczewski
Subject:	Invitation: Brook Mine Application Call @ Fri Feb 12, 2016 11am - 12pm (alan.edwards@wyo.gov)
Date:	Friday, February 12, 2016 6:40:12 AM
Attachments:	invite.ics

Brook Mine Application Call

more details »

When Fri Feb 12, 2016 11am – 12pm Mountain Time

Where Rogo will call Alan, Andrew & Kyle at Kyle's office (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar alan.edwards@wyo.gov

Who
- Mark Rogaczewski - organizer
- andrew.kuhlmann@wyo.gov
- alan.edwards@wyo.gov
- BJ Kristiansen
- kyle.wendtland@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_100.ics (1597 Bytes) cannot be converted to PDF format.

From:	Mark Rogaczewski
To:	andrew.kuhlmann@wyo.gov; BJ Kristiansen; kyle.wendtland@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski
Subject:	Invitation: Brook Mine Application Call @ Fri Feb 12, 2016 11am - 12pm (Andrew Kuhlmann)
Date:	Friday, February 12, 2016 6:40:12 AM
Attachments:	invite.ics

Brook Mine Application Call

more details »

When Fri Feb 12, 2016 11am – 12pm Mountain Time

Where Rogo will call Alan, Andrew & Kyle at Kyle's office (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar Andrew Kuhlmann

Who
- Mark Rogaczewski - organizer
- andrew.kuhlmann@wyo.gov
- BJ Kristiansen
- kyle.wendtland@wyo.gov
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_101.ics (1601 Bytes) cannot be converted to PDF format.

From:	Mark Rogaczewski
To:	kyle.wendtland@wyo.gov; alan.edwards@wyo.gov; andrew.kuhlmann@wyo.gov; BJ Kristiansen; Mark Rogaczewski
Subject:	Invitation: Brook Mine Application Call @ Fri Feb 12, 2016 11am - 12pm (kyle.wendtland@wyo.gov)
Date:	Friday, February 12, 2016 6:40:13 AM
Attachments:	invite.ics

Brook Mine Application Call

more details »

When Fri Feb 12, 2016 11am – 12pm Mountain Time

Where Rogo will call Alan, Andrew & Kyle at Kyle's office (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar kyle.wendtland@wyo.gov

Who
- Mark Rogaczewski - organizer
- alan.edwards@wyo.gov
- andrew.kuhlmann@wyo.gov
- kyle.wendtland@wyo.gov
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account kyle.wendtland@wyo.gov because you are subscribed for invitations on calendar kyle.wendtland@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_102.ics (1600 Bytes) cannot be converted to PDF format.

From:	Mark Rogaczewski
To:	bj.kristiansen@wyo.gov; alan.edwards@wyo.gov; kyle.wendtland@wyo.gov; andrew.kuhlmann@wyo.gov; Mark Rogaczewski
Subject:	Invitation: Brook Mine Application Call @ Fri Feb 12, 2016 11am - 12pm (bjarne.kristiansen@wyo.gov)
Date:	Friday, February 12, 2016 6:40:13 AM
Attachments:	invite.ics

Brook Mine Application Call

more details »

When Fri Feb 12, 2016 11am – 12pm Mountain Time

Where Rogo will call Alan, Andrew & Kyle at Kyle's office (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar bjarne.kristiansen@wyo.gov

Who
- Mark Rogaczewski - organizer
- BJ Kristiansen
- alan.edwards@wyo.gov
- kyle.wendtland@wyo.gov
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_103.ics (1600 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: Alan Edwards; Kyle Wendtland; Andrew Kuhlmann
Subject: Re: Accepted: Brook Mine Application Call @ Fri Feb 12, 2016 11am - 12pm (mark.rogaczewski@wyo.gov)
Date: Friday, February 12, 2016 8:43:12 AM

Alan,

With Kyle not being able to attend, do you want me to call you in your office?

Thanks,
Mark

On Fri, Feb 12, 2016 at 8:23 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> **Alan Edwards has accepted this invitation.**
>
> **Brook Mine Application Call**
>
> When Fri Feb 12, 2016 11am – 12pm Mountain Time
>
> Where Rogo will call Alan, Andrew & Kyle at Kyle's office (map)
>
> Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk
>
> Calendar mark.rogaczewski@wyo.gov
>
> Who
> - Mark Rogaczewski - organizer
> - andrew.kuhlmann@wyo.gov
> - alan.edwards@wyo.gov
> - kyle.wendtland@wyo.gov
> - BJ Kristiansen
>
> Invitation from Google Calendar
>
> You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitation replies on calendar mark.rogaczewski@wyo.gov.
>
> To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.
>
> Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street

Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Alan Edwards
To: Mark Rogaczewski
Cc: Kyle Wendtland; Andrew Kuhlmann
Subject: Re: Accepted: Brook Mine Application Call @ Fri Feb 12, 2016 11am - 12pm (mark.rogaczewski@wyo.gov)
Date: Friday, February 12, 2016 9:00:26 AM

That would work. Alan

On Fri, Feb 12, 2016 at 8:43 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan,
>
> With Kyle not being able to attend, do you want me to call you in your office?
>
> Thanks,
> Mark
>
> On Fri, Feb 12, 2016 at 8:23 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>
> > **Alan Edwards has accepted this invitation.**
> >
> > **Brook Mine Application Call**
> >
> > When Fri Feb 12, 2016 11am – 12pm Mountain Time
> >
> > Where Rogo will call Alan, Andrew & Kyle at Kyle's office (map)
> >
> > Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk
> >
> > Calendar mark.rogaczewski@wyo.gov
> >
> > Who
> > - Mark Rogaczewski - organizer
> > - andrew.kuhlmann@wyo.gov
> > - alan.edwards@wyo.gov
> > - kyle.wendtland@wyo.gov
> > - BJ Kristiansen
> >
> > Invitation from Google Calendar
> >
> > You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitation replies on calendar mark.rogaczewski@wyo.gov.
> >
> > To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.
> >
> > Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: bj kristiansen
To: Andrew Kuhlmann
Subject: Brook update
Date: Wednesday, February 24, 2016 8:31:22 AM

Andrew,

I am back in the office after being out due to the plague, or something like it. How is the battle going with the Brook Mine surface owner issues? I know you tried to call so if you still need to talk to me, give me a shout.

-bj

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	bj kristiansen
To:	Andrew Kuhlmann
Cc:	mark.rogaczewski@wyo.gov; Alan Edwards; Kyle Wendtland
Subject:	Brook Mine permit application, Round 5 adjudication, surface owner consent
Date:	Tuesday, March 01, 2016 8:07:57 AM

Andrew,

Did you get a chance to investigate the documents received from Holland and Hart last week? My primary goal is to determine what day is defined as our 30 day comment period. If we are still working with the February 3rd letter then our deadline is Friday, March 4. However, if your office received further information for the RAMACO surface owner consent then we need to reset the deadline. Let me know which way to go for our due date. We haven't seen anything yet in District 3 so, for now, we are assuming the grace period ends Friday. I'll see you tomorrow morning in Cheyenne if you are attending the EQC hearing. We can compare notes, if you so desire. We are leaving Sheridan at 3:30 AM to be in Cheyenne by 8:30 in order to give our testimony at 9:00. So we can talk any time in the morning when we are not occupied by EQC involvement. See you then.

-bj kristiansen

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	bj kristiansen
Cc:	Andrew Kuhlmann; Mark Rogaczewski; Kyle Wendtland
Subject:	Re: Brook Mine permit application, Round 5 adjudication, surface owner consent
Date:	Tuesday, March 01, 2016 3:54:05 PM

We need to make sure that we have taken whatever action necessary by cob Thursday. I will be at EQC. Alan

On Tue, Mar 1, 2016 at 8:07 AM, bj kristiansen <bj.kristiansen@wyo.gov> wrote:

> Andrew,
>
> Did you get a chance to investigate the documents received from Holland and Hart last week? My primary goal is to determine what day is defined as our 30 day comment period. If we are still working with the February 3rd letter then our deadline is Friday, March 4. However, if your office received further information for the RAMACO surface owner consent then we need to reset the deadline. Let me know which way to go for our due date. We haven't seen anything yet in District 3 so, for now, we are assuming the grace period ends Friday. I'll see you tomorrow morning in Cheyenne if you are attending the EQC hearing. We can compare notes, if you so desire. We are leaving Sheridan at 3:30 AM to be in Cheyenne by 8:30 in order to give our testimony at 9:00. So we can talk any time in the morning when we are not occupied by EQC involvement. See you then.
>
> -bj kristiansen
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	bj kristiansen
To:	jbarron@wwcengineering.com
Cc:	Alan Edwards; Andrew Kuhlmann; Kyle Wendtland; mark.rogaczewski@wyo.gov
Subject:	Brook Mine permit application Adjudication, Surface Owner approval of mine and reclamation plans, TFN 6 2/025
Date:	Friday, March 04, 2016 10:21:37 AM
Attachments:	Brook Round 5 LQD Comments.pdf

Jeff,

The Round 5 comments on the Brook Mine permit application Adjudication section have been completed. The cover letter and comments are attached. The printed version of the document has been placed in the mail and will be mailed out today, Friday, March 4, 2016 . Please examine the material and craft your response accordingly. Let us know if there is anything else you may need at this time.

-Bj Kristiansen

Bjarne Kristiansen
Natural Resources Program Principal
WDEQ-LQD, District III
(307) 675-5615
2100 W. 5th Street
Sheridan, WY 82801

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

March 3, 2016

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Round 5 Technical Review, Brook Mine Coal Mine Permit Application, Adjudication Volume, TFN 6 2/025

Dear : Mr. Atkins

The Land Quality Division received your Round 4 Adjudication comment responses from Holland and Hart on February 3, 2016. The statutory requirement for LQD to respond to the second round responses is 30 days from date of receipt, which is March 4, 2016. The responses from your attorneys have been reviewed in their entirety and comments, questions, noteworthy deficiencies, and requests for additional information were generated for Round 5. These have been gathered by the permit coordinator and are presented as an attachment to this letter.

Please review the Fifth Round Adjudication comments and prepare your replies accordingly. Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round 5 materials. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III

Cc: Cheyenne LQD files w/attachment

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

March 3, 2016

Land Quality Division Round 5 Comments
Brook Mine Permit Application, TFN 6 2/025
Adjudication Section, Surface Owner Consent and Approval

The Department of Environmental Quality, Land Quality Division ("Division") provides the following comments after examining the Applicant's responses to the Division's fourth round of comments on the adjudication section of the Brook Mine Permit Application, TFN 6 2/025. These comments relate to the permit application requirements under Wyoming Statutes § 35-11-406(b)(xi) and (xii) for certain written consents from the surface landowners whose lands are located inside the proposed mine permit boundary.

In its responses, the Applicant provided additional documents that it believes support a conclusion that the Division should deem the application technically adequate and suitable for publication. The Applicant described its position that the landowner consent requirements in Wyoming Statute § 35-11-406(b)(xi) and (xii) do not apply to lands conveyed in the 1954 Deed between Sheridan-Wyoming Coal Company and the Big Horn Coal Company. The Applicant also provided excerpts from files for existing mine permits that the Applicant believes support the Department deeming this application technically adequate.

After examining the response materials, the Division has determined that the permit application is still deficient at this time.

Despite the Applicant's arguments regarding the 1954 Deed, the landowner consent requirements under Wyoming Statute § 35-11-406(b)(xi) and (xii) continue to apply to lands within the proposed permit boundary. For the surface landowners and lands affected by it, the 1954 Deed appears to grant the Applicant the right to enter and commence operations on so much of the surface as may be necessary or convenient for the purposes identified in the deed. This likely would satisfy that particular requirement under Wyoming Statute § 35-11-406(b)(xi) to the extent that the Applicant's access and occupation of particular lands is necessary or convenient in accordance with the deed. However, even in light of the additional documents and legal arguments provided by the Applicant, the 1954 Deed does not constitute an instrument of consent from the surface landowners to the mining and reclamation plans, as required by both subsections(b)(xi) and (xii). While the 1954 Deed appears to grant the Applicant some rights to use the surface of lands under the deed, it does not grant unfettered permission regarding how the Applicant may use those lands.

Based on these determinations, the Division finds that the adjudication section of the permit application does not contain all necessary surface landowner consents and is therefore deficient. The Applicant must obtain written approval of the mine and reclamation plans from the surface landowners within the proposed permit boundary, or obtain appropriate orders in lieu of consent in accordance with Wyoming Statute § 35-11-406(b)(xii), before the Division may declare the application technically complete and suitable for publication.

From:	Mark Rogaczewski
To:	bj kristiansen
Cc:	Jeff Barron; Alan Edwards; Andrew Kuhlmann; Kyle Wendtland
Subject:	Re: Brook Mine permit application Adjudication, Surface Owner approval of mine and reclamation plans, TFN 6 2/025
Date:	Friday, March 04, 2016 10:38:02 AM

Bj,

Thanks for your work on sending this review to meet today's review deadline.

Mark

On Fri, Mar 4, 2016 at 10:21 AM, bj kristiansen <bj.kristiansen@wyo.gov> wrote:

> Jeff,
>
> The Round 5 comments on the Brook Mine permit application Adjudication section have been completed. The cover letter and comments are attached. The printed version of the document has been placed in the mail and will be mailed out today, Friday, March 4, 2016 . Please examine the material and craft your response accordingly. Let us know if there is anything else you may need at this time.
>
> -Bj Kristiansen
>
> Bjarne Kristiansen
>
> Natural Resources Program Principal
>
> WDEQ-LQD, District III
>
> (307) 675-5615
>
> 2100 W. 5th Street
>
> Sheridan, WY 82801
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor

LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Todd Parfitt
Subject:	Fwd: Brook Mine permit application Adjudication, Surface Owner approval of mine and reclamation plans, TFN 6 2/025
Date:	Friday, March 04, 2016 10:46:09 AM
Attachments:	attachedFile.html Brook Round 5 LQD Comments.pdf

---

FYI

Sent from my iPhone

Begin forwarded message:

From: "bj kristiansen" <bj.kristiansen@wyo.gov>
Date: March 4, 2016 at 10:21:24 AM MST
To: <jbarron@wwcengineering.com>
Cc: "Alan Edwards" <alan.edwards@wyo.gov>, "'Andrew Kuhlmann'" <andrew.kuhlmann@wyo.gov>, "Kyle Wendtland" <kyle.wendtland@wyo.gov>, <mark.rogaczewski@wyo.gov>
Subject: Brook Mine permit application Adjudication, Surface Owner approval of mine and reclamation plans, TFN 6 2/025

Jeff,

The Round 5 comments on the Brook Mine permit application Adjudication section have been completed. The cover letter and comments are attached. The printed version of the document has been placed in the mail and will be mailed out today, Friday, March 4, 2016 . Please examine the material and craft your response accordingly. Let us know if there is anything else you may need at this time.

-Bj Kristiansen

Bjarne Kristiansen
Natural Resources Program Principal
WDEQ-LQD, District III
(307) 675-5615
2100 W. 5th Street
Sheridan, WY 82801

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

March 3, 2016

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Round 5 Technical Review, Brook Mine Coal Mine Permit Application, Adjudication Volume, TFN 6 2/025

Dear : Mr. Atkins

The Land Quality Division received your Round 4 Adjudication comment responses from Holland and Hart on February 3, 2016. The statutory requirement for LQD to respond to the second round responses is 30 days from date of receipt, which is March 4, 2016. The responses from your attorneys have been reviewed in their entirety and comments, questions, noteworthy deficiencies, and requests for additional information were generated for Round 5. These have been gathered by the permit coordinator and are presented as an attachment to this letter.

Please review the Fifth Round Adjudication comments and prepare your replies accordingly. Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round 5 materials. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III

Cc: Cheyenne LQD files w/attachment

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

March 3, 2016

Land Quality Division Round 5 Comments
Brook Mine Permit Application, TFN 6 2/025
Adjudication Section, Surface Owner Consent and Approval

The Department of Environmental Quality, Land Quality Division ("Division") provides the following comments after examining the Applicant's responses to the Division's fourth round of comments on the adjudication section of the Brook Mine Permit Application, TFN 6 2/025. These comments relate to the permit application requirements under Wyoming Statutes § 35-11-406(b)(xi) and (xii) for certain written consents from the surface landowners whose lands are located inside the proposed mine permit boundary.

In its responses, the Applicant provided additional documents that it believes support a conclusion that the Division should deem the application technically adequate and suitable for publication. The Applicant described its position that the landowner consent requirements in Wyoming Statute § 35-11-406(b)(xi) and (xii) do not apply to lands conveyed in the 1954 Deed between Sheridan-Wyoming Coal Company and the Big Horn Coal Company. The Applicant also provided excerpts from files for existing mine permits that the Applicant believes support the Department deeming this application technically adequate.

After examining the response materials, the Division has determined that the permit application is still deficient at this time.

Despite the Applicant's arguments regarding the 1954 Deed, the landowner consent requirements under Wyoming Statute § 35-11-406(b)(xi) and (xii) continue to apply to lands within the proposed permit boundary. For the surface landowners and lands affected by it, the 1954 Deed appears to grant the Applicant the right to enter and commence operations on so much of the surface as may be necessary or convenient for the purposes identified in the deed. This likely would satisfy that particular requirement under Wyoming Statute § 35-11-406(b)(xi) to the extent that the Applicant's access and occupation of particular lands is necessary or convenient in accordance with the deed. However, even in light of the additional documents and legal arguments provided by the Applicant, the 1954 Deed does not constitute an instrument of consent from the surface landowners to the mining and reclamation plans, as required by both subsections(b)(xi) and (xii). While the 1954 Deed appears to grant the Applicant some rights to use the surface of lands under the deed, it does not grant unfettered permission regarding how the Applicant may use those lands.

Based on these determinations, the Division finds that the adjudication section of the permit application does not contain all necessary surface landowner consents and is therefore deficient. The Applicant must obtain written approval of the mine and reclamation plans from the surface landowners within the proposed permit boundary, or obtain appropriate orders in lieu of consent in accordance with Wyoming Statute § 35-11-406(b)(xii), before the Division may declare the application technically complete and suitable for publication.

From:	Jeff Barron
To:	bj kristiansen
Cc:	Alan Edwards; Andrew Kuhlmann; Kyle Wendtland; mark.rogaczewski@wyo.gov
Subject:	RE: Brook Mine permit application Adjudication, Surface Owner approval of mine and reclamation plans, TFN 6 2/025
Date:	Friday, March 04, 2016 11:12:15 AM

BJ,

I am in receipt of your letter.

From: bj kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Friday, March 04, 2016 10:21 AM
To: Jeff Barron
Cc: Alan Edwards; 'Andrew Kuhlmann'; Kyle Wendtland; mark.rogaczewski@wyo.gov
Subject: Brook Mine permit application Adjudication, Surface Owner approval of mine and reclamation plans, TFN 6 2/025

Jeff,

The Round 5 comments on the Brook Mine permit application Adjudication section have been completed. The cover letter and comments are attached. The printed version of the document has been placed in the mail and will be mailed out today, Friday, March 4, 2016 . Please examine the material and craft your response accordingly. Let us know if there is anything else you may need at this time.

-Bj Kristiansen

Bjarne Kristiansen
Natural Resources Program Principal
WDEQ-LQD, District III
(307) 675-5615
2100 W. 5th Street
Sheridan, WY 82801

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: bj kristiansen
To: jbarron@wwcengineering.com
Cc: mark.rogaczewski@wyo.gov; Andrew Kuhlmann; Alan Edwards; Kyle Wendtland
Subject: Ramaco, Brook Mine permit application, TFN 6 2/025
Date: Wednesday, March 23, 2016 10:08:45 AM

Jeff,

Mr. Jordan Sweeny, representing Big Horn Coal Company, called me yesterday afternoon asking about the letter he received from Holland and Hart declaring Ramaco's intention to petition the Environmental Quality Council for a hearing. The letter indicated that Ramaco requested the EQC to hear the argument related to the surface owner approval of the Mine Plan and Reclamation Plan for the proposed Brook Mine permit application. Unfortunately, I was unable to address his concerns since I have not yet had a chance to examine the documents.

Did LQD receive copies of the materials under consideration? Though I have not yet seen any of these documents, they may be in the mail and have not reached my desk yet. If LQD was not scheduled to receive the information, would it be possible to acquire copies of the documents? Since they are directly related to an active mine permit application (TFN 6 2/025), LQD requests a copy for the correspondence files. Should this prove to be difficult, please contact me at your earliest convenience so we can discuss the possible issues at hand.

Bj Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Jeff Barron
To: bj kristiansen
Subject: RE: Ramaco, Brook Mine permit application, TFN 6 2/025
Date: Wednesday, March 23, 2016 10:19:31 AM

I'm on a call. I'll call you in a few to discuss

From: bj kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, March 23, 2016 10:08 AM
To: Jeff Barron
Cc: mark.rogaczewski@wyo.gov; 'Andrew Kuhlmann'; Alan Edwards; Kyle Wendtland
Subject: Ramaco, Brook Mine permit application, TFN 6 2/025

Jeff,

Mr. Jordan Sweeny, representing Big Horn Coal Company, called me yesterday afternoon asking about the letter he received from Holland and Hart declaring Ramaco's intention to petition the Environmental Quality Council for a hearing. The letter indicated that Ramaco requested the EQC to hear the argument related to the surface owner approval of the Mine Plan and Reclamation Plan for the proposed Brook Mine permit application. Unfortunately, I was unable to address his concerns since I have not yet had a chance to examine the documents.

Did LQD receive copies of the materials under consideration? Though I have not yet seen any of these documents, they may be in the mail and have not reached my desk yet. If LQD was not scheduled to receive the information, would it be possible to acquire copies of the documents? Since they are directly related to an active mine permit application (TFN 6 2/025), LQD requests a copy for the correspondence files. Should this prove to be difficult, please contact me at your earliest convenience so we can discuss the possible issues at hand.

Bj Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Jeff Barron
To: bj kristiansen
Cc: mark.rogaczewski@wyo.gov; Andrew Kuhlmann; Alan Edwards; Kyle Wendtland
Subject: RE: Ramaco, Brook Mine permit application, TFN 6 2/025
Date: Wednesday, March 23, 2016 12:40:13 PM

BJ,

A copy of the filing and all exhibits have been posted to the EQC website.

https://eqc.wyo.gov/Public/Pleadings.aspx?DocketId=3227

From: bj kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, March 23, 2016 10:08 AM
To: Jeff Barron
Cc: mark.rogaczewski@wyo.gov; 'Andrew Kuhlmann'; Alan Edwards; Kyle Wendtland
Subject: Ramaco, Brook Mine permit application, TFN 6 2/025

Jeff,

Mr. Jordan Sweeny, representing Big Horn Coal Company, called me yesterday afternoon asking about the letter he received from Holland and Hart declaring Ramaco's intention to petition the Environmental Quality Council for a hearing. The letter indicated that Ramaco requested the EQC to hear the argument related to the surface owner approval of the Mine Plan and Reclamation Plan for the proposed Brook Mine permit application. Unfortunately, I was unable to address his concerns since I have not yet had a chance to examine the documents.

Did LQD receive copies of the materials under consideration? Though I have not yet seen any of these documents, they may be in the mail and have not reached my desk yet. If LQD was not scheduled to receive the information, would it be possible to acquire copies of the documents? Since they are directly related to an active mine permit application (TFN 6 2/025), LQD requests a copy for the correspondence files. Should this prove to be difficult, please contact me at your earliest convenience so we can discuss the possible issues at hand.

Bj Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: bj kristiansen
To: Andrew Kuhlmann
Subject: EQC Brook Mine hearing request.
Date: Wednesday, March 23, 2016 12:54:17 PM

Andrew,

I just looked at the EQC case 16-1601 on the website and noticed that the TFN number listed as 6 2/205 is incorrect. The proper number is TFN 6 2/025. Who do I contact to fix it?

-bj

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: bj kristiansen
To: Andrew Kuhlmann
Subject: Brook Mine Petition for Order in Lieu of Consent, EQC Docket No. 16-1601
Date: Wednesday, March 23, 2016 3:16:27 PM

Andrew,

Mark and I were wondering about the Brook Mine materials that are available at the EQC website. Specifically, what documents from the site do you think we should print out for our correspondence file? We already have all of the ones originating from this office. Perhaps all we need is the petition itself but we aren't sure if that is sufficient. Let us know if our correspondence files need to contain other documents in order to be consistent with the EQC materials.

-bj

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Jeff Barron
Cc: bj kristiansen; Andrew Kuhlmann; Alan Edwards; Kyle Wendtland
Subject: Re: Ramaco, Brook Mine permit application, TFN 6 2/025
Date: Wednesday, March 23, 2016 3:27:07 PM

Jeff,

Thanks for forwarding the EQC link.

Mark

On Wed, Mar 23, 2016 at 12:40 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> BJ,
>
> A copy of the filing and all exhibits have been posted to the EQC website.
>
> https://eqc.wyo.gov/Public/Pleadings.aspx?DocketId=3227
>
> ---
>
> **From:** bj kristiansen [mailto:bj.kristiansen@wyo.gov]
> **Sent:** Wednesday, March 23, 2016 10:08 AM
> **To:** Jeff Barron
> **Cc:** mark.rogaczewski@wyo.gov; 'Andrew Kuhlmann'; Alan Edwards; Kyle Wendtland
> **Subject:** Ramaco, Brook Mine permit application, TFN 6 2/025
>
> Jeff,
>
> Mr. Jordan Sweeny, representing Big Horn Coal Company, called me yesterday afternoon asking about the letter he received from Holland and Hart declaring Ramaco's intention to petition the Environmental Quality Council for a hearing. The letter indicated that Ramaco requested the EQC to hear the argument related to the surface owner approval of the Mine Plan and Reclamation Plan for the proposed Brook Mine permit application. Unfortunately, I was unable to address his concerns since I have not yet had a chance to examine the documents.
>
> Did LQD receive copies of the materials under consideration? Though I have not yet seen any of these documents, they may be in the mail and have not reached my desk yet. If LQD was not scheduled to receive the information, would it be possible to acquire copies of the documents? Since they are directly related to an

active mine permit application (TFN 6 2/025), LQD requests a copy for the correspondence files. Should this prove to be difficult, please contact me at your earliest convenience so we can discuss the possible issues at hand.

Bj Kristiansen, PG

Natural Resources Program Principal

WDEQ-LQD District III

Sheridan, WY 82801

(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From: Jeff Barron
To: Mark Rogaczewski
Cc: bj kristiansen; Andrew Kuhlmann; Alan Edwards; Kyle Wendtland
Subject: RE: Ramaco, Brook Mine permit application, TFN 6 2/025
Date: Wednesday, March 23, 2016 3:44:39 PM

Mark,

No problem

From: Mark Rogaczewski [mailto:mark.rogaczewski@wyo.gov]
Sent: Wednesday, March 23, 2016 3:27 PM
To: Jeff Barron
Cc: bj kristiansen; Andrew Kuhlmann; Alan Edwards; Kyle Wendtland
Subject: Re: Ramaco, Brook Mine permit application, TFN 6 2/025

Jeff,

Thanks for forwarding the EQC link.

Mark

On Wed, Mar 23, 2016 at 12:40 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:
BJ,

A copy of the filing and all exhibits have been posted to the EQC website.

https://eqc.wyo.gov/Public/Pleadings.aspx?DocketId=3227

From: bj kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Wednesday, March 23, 2016 10:08 AM
To: Jeff Barron
Cc: mark.rogaczewski@wyo.gov; 'Andrew Kuhlmann'; Alan Edwards; Kyle Wendtland
Subject: Ramaco, Brook Mine permit application, TFN 6 2/025

Jeff,

Mr. Jordan Sweeny, representing Big Horn Coal Company, called me yesterday afternoon asking about the letter he received from Holland and Hart declaring Ramaco's intention to petition the Environmental Quality Council for a hearing. The letter indicated that Ramaco requested the EQC to hear the argument related to the surface owner approval of the Mine Plan and Reclamation Plan for the proposed Brook Mine permit application. Unfortunately, I was unable to address his concerns since I have not yet had a chance to examine the documents.

Did LQD receive copies of the materials under consideration? Though I have not yet seen any of these documents, they may be in the mail and have not reached my desk yet. If LQD was not scheduled to receive the information, would it be possible to acquire copies of the documents? Since they are directly related to an active mine permit application (TFN 6 2/025), LQD requests a copy for the correspondence files. Should this prove to be difficult, please contact me at your earliest convenience so we can discuss the possible issues at hand.

Bj Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: bj kristiansen
To: Kyle Wendtland; Alan Edwards
Cc: mark.rogaczewski@wyo.gov; Andrew Kuhlmann
Subject: Ramaco Meeting this morning
Date: Thursday, March 24, 2016 1:43:25 PM

Kyle and Alan,

Mark and I had an informal meeting this morning with WWC representing Ramaco and the Brook Mine permit application. They had several questions about the acreage within the proposed permit boundary that overlaps with Big Horn Coal Company's permit. The issue that was under consideration is the status of the old BHC shop/warehouse facility that is not yet reclaimed. Allow me to highlight several of the topics discussed in our meeting:

- Sheridan County is a zoned county, zoning is enacted by the county commissioners and enforced by various county agencies, depending on their administrative responsibility. Zone changes can occur through a process defined by the county rules and regulations.
- The site occupied by the BHC shop facility is currently zoned as agricultural. Post mining land use was also defined as agricultural. Ramaco was concerned that they may run into difficulties with county zoning laws if they permit the land on which the BHC shop is located. The land should be zoned industrial if the shop is being used by some commercial entity but that possibility is currently uncertain.
- Ramaco does not want to be responsible for reclamation of BHC facilities remaining within the permit boundary.
- On a side-note; If the property were to be rezoned to Industrial, the value of the acreage would jump from $700/acre (agricultural) to $7,600/acre (Industrial). Should Ramaco attempt to purchase the property from BHC, it can be readily seen that BHC would definitely want to have the property zoned industrial. The acreage in question is approximately 2 ½ acres in size.
- The conversation was generally an information gathering session for Ramaco to ascertain existing ground conditions and their effects on the Brook Mine permit application.

We requested Ramaco, through WWC, to submit a letter or memo that outlines their concerns, comments, or questions. We made it clear that we would do our best to respond to their request or we would forward any questions we could not answer to the appropriate entity for clarification. This meeting did not cover anything related to their EQC request regarding surface owner consent and we kept it to the questions regarding potential zoning issues. We are awaiting their written questions and comments arising from this meeting.

-bj Kristiansen
Natural Resources Program Principal
WDEQ-LQD District III

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	bj kristiansen
Cc:	Kyle Wendtland; Alan Edwards; Andrew Kuhlmann
Subject:	Re: Ramaco Meeting this morning
Date:	Thursday, March 24, 2016 2:13:11 PM

Bj,

Excellent summary.

Thanks,

Mark

On Thu, Mar 24, 2016 at 1:43 PM, bj kristiansen <bj.kristiansen@wyo.gov> wrote:

> Kyle and Alan,
>
> Mark and I had an informal meeting this morning with WWC representing Ramaco and the Brook Mine permit application. They had several questions about the acreage within the proposed permit boundary that overlaps with Big Horn Coal Company's permit. The issue that was under consideration is the status of the old BHC shop/warehouse facility that is not yet reclaimed. Allow me to highlight several of the topics discussed in our meeting:
>
> - Sheridan County is a zoned county, zoning is enacted by the county commissioners and enforced by various county agencies, depending on their administrative responsibility. Zone changes can occur through a process defined by the county rules and regulations.
>
> - The site occupied by the BHC shop facility is currently zoned as agricultural. Post mining land use was also defined as agricultural. Ramaco was concerned that they may run into difficulties with county zoning laws if they permit the land on which the BHC shop is located. The land should be zoned industrial if the shop is being used by some commercial entity but that possibility is currently uncertain.
>
> - Ramaco does not want to be responsible for reclamation of BHC facilities remaining within the permit boundary.
>
> - On a side-note; If the property were to be rezoned to Industrial, the value of the acreage would jump from $700/acre (agricultural) to $7,600/acre (Industrial). Should Ramaco attempt to purchase the property from BHC, it can be readily seen that BHC would definitely want to have the property zoned industrial. The acreage in question is approximately 2 ½ acres in size.
>
> - The conversation was generally an information gathering session for Ramaco to ascertain existing ground conditions and their effects on the Brook Mine permit application.

We requested Ramaco, through WWC, to submit a letter or memo that outlines their concerns, comments, or questions. We made it clear that we would do our best to respond to their request or we would forward any questions we could not answer to the appropriate entity for clarification. This meeting did not cover anything related to their EQC request regarding surface owner consent and we kept it to the questions regarding potential zoning issues. We are awaiting their written questions and comments arising from this meeting.

-bj Kristiansen

Natural Resources Program Principal

WDEQ-LQD District III

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Alan Edwards; Andrew Kuhlmann; Stacy Page; BJ Kristiansen
Subject: Fwd: request for meeting
Date: Tuesday, April 12, 2016 9:46:52 AM

Alan and Andrew,

I would like to discuss this request for a meeting from Jill Morrison of the Powder River Basin Resource Council(PRBRC). Due to the legal challenges/court cases currently on-going related to this application, and the public comment process yet to be initiated, I have concerns with having a meeting that may or may not circumvent LQD's normal public notice procedures.

Please advise how you wish LQD D3 to respond to Ms. Morrison's request.

Thanks,
Mark
---------- Forwarded message ----------
From: **Jill Morrison** <jmorrison@powderriverbasin.org>
Date: Mon, Apr 11, 2016 at 11:26 AM
Subject: request for meeting
To: mark.rogaczewski@wyo.gov, bj kristiansen <bj.kristiansen@wyo.gov>
Cc: Shannon Anderson <sanderson@powderriverbasin.org>

Dear Mark and BJ,

We would like to request a meeting with the LQD staff who have worked on the Brook Mine Ramaco permit with nearby landowners. There are many questions from landowners regarding the proposed and pending permit. Can you provide us with some possible dates for a meeting in the near future. We would be happy to get a meeting room in Ranchester to host this meeting so landowners can understand more about the pending permit. We would hope that you could meet in the early evening to accommodate working people. Thanks,

Jill Morrison

Organizer

Powder River Basin Resource Council

934 North Main

Sheridan, Wyoming 82801

(307) 672-5809 – work

(307) 751-5574 – cell

www.powderriverbasin.org

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Mark Rogaczewski
Cc:	Andrew Kuhlmann; Stacy Page; BJ Kristiansen; Kyle Wendtland
Subject:	Re: request for meeting
Date:	Tuesday, April 12, 2016 10:23:19 AM

I have copied this to Kyle as the Administrator since the question is of a more general nature and procedural.

Andrew, I will call you on this this afternoon.

Alan

Sent from my iPhone

On Apr 12, 2016, at 9:46 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan and Andrew,
>
> I would like to discuss this request for a meeting from Jill Morrison of the Powder River Basin Resource Council(PRBRC). Due to the legal challenges/court cases currently on-going related to this application, and the public comment process yet to be initiated, I have concerns with having a meeting that may or may not circumvent LQD's normal public notice procedures.
>
> Please advise how you wish LQD D3 to respond to Ms. Morrison's request.
>
> Thanks,
> Mark
> ---------- Forwarded message ----------
> From: **Jill Morrison** <jmorrison@powderriverbasin.org>
> Date: Mon, Apr 11, 2016 at 11:26 AM
> Subject: request for meeting
> To: mark.rogaczewski@wyo.gov, bj kristiansen <bj.kristiansen@wyo.gov>
> Cc: Shannon Anderson <sanderson@powderriverbasin.org>
>
> Dear Mark and BJ,
>
> We would like to request a meeting with the LQD staff who have worked on the Brook Mine Ramaco permit with nearby landowners. There are many questions from landowners regarding the proposed and pending permit. Can you provide us with some possible dates for a meeting in the near future. We would be happy to get a meeting room in Ranchester to host this meeting so landowners can understand more

about the pending permit. We would hope that you could meet in the early evening to accommodate working people. Thanks,

Jill Morrison

Organizer

Powder River Basin Resource Council

934 North Main

Sheridan, Wyoming 82801

(307) 672-5809 – work

(307) 751-5574 – cell

www.powderriverbasin.org

--

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; BJ Kristiansen; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Call on Brook Mining @ Thu Apr 14, 2016 3pm - 4pm (mark.rogaczewski@wyo.gov)
Date: Thursday, April 14, 2016 2:07:51 PM
Attachments: invite.ics

Call on Brook Mining

more details »

I will call everyone and conference us all in to the same line

When Thu Apr 14, 2016 3pm – 4pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar mark.rogaczewski@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- BJ Kristiansen
- alan.edwards@wyo.gov
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_104.ics (1442 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski; Andrew Kuhlmann
Subject: Invitation: Call on Brook Mining @ Thu Apr 14, 2016 3pm - 4pm (bjarne.kristiansen@wyo.gov)
Date: Thursday, April 14, 2016 2:07:51 PM
Attachments: invite.ics

Call on Brook Mining

more details »

I will call everyone and conference us all in to the same line

When Thu Apr 14, 2016 3pm – 4pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar bjarne.kristiansen@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- BJ Kristiansen
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_105.ics (1440 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; BJ Kristiansen; Mark Rogaczewski; Andrew Kuhlmann
Subject: Invitation: Call on Brook Mining @ Thu Apr 14, 2016 3pm - 4pm (alan.edwards@wyo.gov)
Date: Thursday, April 14, 2016 2:07:54 PM
Attachments: invite.ics

Call on Brook Mining

more details »

I will call everyone and conference us all in to the same line

When Thu Apr 14, 2016 3pm – 4pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar alan.edwards@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- BJ Kristiansen
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_106.ics (1437 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; BJ Kristiansen; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Updated Invitation: Call on Brook Mining @ Thu Apr 14, 2016 3pm - 3:15pm (mark.rogaczewski@wyo.gov)
Date: Thursday, April 14, 2016 2:08:19 PM
Attachments: invite.ics

This event has been changed.

Call on Brook Mining

more details »

I will call everyone and conference us all in to the same line

When **Changed:** Thu Apr 14, 2016 3pm – 3:15pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar mark.rogaczewski@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- BJ Kristiansen
- Mark Rogaczewski
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for updated invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_107.ics (1442 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; Mark Rogaczewski; BJ Kristiansen; Andrew Kuhlmann
Subject: Updated Invitation: Call on Brook Mining @ Thu Apr 14, 2016 3pm - 3:15pm (alan.edwards@wyo.gov)
Date: Thursday, April 14, 2016 2:08:19 PM
Attachments: invite.ics

This event has been changed.

Call on Brook Mining

more details »

I will call everyone and conference us all in to the same line

When **Changed:** Thu Apr 14, 2016 3pm – 3:15pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar alan.edwards@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- Mark Rogaczewski
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for updated invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_108.ics (1437 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski; Andrew Kuhlmann
Subject: Updated Invitation: Call on Brook Mining @ Thu Apr 14, 2016 3pm - 3:15pm (bjarne.kristiansen@wyo.gov)
Date: Thursday, April 14, 2016 2:08:20 PM
Attachments: invite.ics

This event has been changed.

Call on Brook Mining

more details »

I will call everyone and conference us all in to the same line

When **Changed:** Thu Apr 14, 2016 3pm – 3:15pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar bjarne.kristiansen@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- BJ Kristiansen
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for updated invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_109.ics (1440 Bytes) cannot be converted to PDF format.

From:	bj kristiansen
To:	Kyle Wendtland; Andrew Kuhlmann
Cc:	Alan Edwards; mark.rogaczewski@wyo.gov
Subject:	Brook Mine EQC hearing request
Date:	Wednesday, April 20, 2016 9:28:57 AM

Gentlemen,

I received a phone call from Jeff Baron of WWC Engineering about twenty minutes ago regarding the Brook Mine permit application. He asked if it would be possible for LQD to author a letter stating that the permit application for the Brook Mine is complete except for the surface owner issues still remaining related to Big Horn Coal and Padlock Ranch. The letter would essentially confirm that, by inference, the Mine Plan and Reclamation Plan are technically complete and acceptable. The information will then be submitted to the EQC in the hearing on surface owner issues. Mark and I believe the answer is a resounding No. However, we wanted to run the idea past you to insure that we are making the correct call on the request. Please contact Mark or me with your thoughts on the advisability of providing such a letter to Ramaco for their use with their EQC hearing.

-bj

Bj Kristiansen, PG
Natural Resources Program Principal
LQD-District III

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Alan Edwards
To: bj kristiansen
Cc: Kyle Wendtland; Andrew Kuhlmann; <mark.rogaczewski@wyo.gov>
Subject: Re: Brook Mine EQC hearing request
Date: Wednesday, April 20, 2016 10:16:56 AM

My answer is no unless Andrew feels otherwise. We will be an advisor to EQC no the matter and will answer questions there. Alan

Sent from my iPhone

On Apr 20, 2016, at 11:28 AM, bj kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen,
>
> I received a phone call from Jeff Baron of WWC Engineering about twenty minutes ago regarding the Brook Mine permit application. He asked if it would be possible for LQD to author a letter stating that the permit application for the Brook Mine is complete except for the surface owner issues still remaining related to Big Horn Coal and Padlock Ranch. The letter would essentially confirm that, by inference, the Mine Plan and Reclamation Plan are technically complete and acceptable. The information will then be submitted to the EQC in the hearing on surface owner issues. Mark and I believe the answer is a resounding No. However, we wanted to run the idea past you to insure that we are making the correct call on the request. Please contact Mark or me with your thoughts on the advisability of providing such a letter to Ramaco for their use with their EQC hearing.
>
> -bj
>
> Bj Kristiansen, PG
> Natural Resources Program Principal
> LQD-District III
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: bj kristiansen
To: Alan Edwards
Cc: Kyle Wendtland; mark.rogaczewski@wyo.gov; Andrew Kuhlmann
Subject: RE: Brook Mine EQC hearing request
Date: Wednesday, April 20, 2016 10:21:05 AM

Thank you Alan, we appreciate the confirmation of our thought process.

-bj

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 20, 2016 10:17 AM
To: bj kristiansen <bj.kristiansen@wyo.gov>
Cc: Kyle Wendtland <kyle.wendtland@wyo.gov>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; <mark.rogaczewski@wyo.gov> <mark.rogaczewski@wyo.gov>
Subject: Re: Brook Mine EQC hearing request

My answer is no unless Andrew feels otherwise. We will be an advisor to EQC no the matter and will answer questions there. Alan

Sent from my iPhone

On Apr 20, 2016, at 11:28 AM, bj kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen,
>
> I received a phone call from Jeff Baron of WWC Engineering about twenty minutes ago regarding the Brook Mine permit application. He asked if it would be possible for LQD to author a letter stating that the permit application for the Brook Mine is complete except for the surface owner issues still remaining related to Big Horn Coal and Padlock Ranch. The letter would essentially confirm that, by inference, the Mine Plan and Reclamation Plan are technically complete and acceptable. The information will then be submitted to the EQC in the hearing on surface owner issues. Mark and I believe the answer is a resounding No. However, we wanted to run the idea past you to insure that we are making the correct call on the request. Please contact Mark or me with your thoughts on the advisability of providing such a letter to Ramaco for their use with their EQC hearing.
>
> -bj
>
> Bj Kristiansen, PG
> Natural Resources Program Principal
> LQD-District III

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2016.0.7539 / Virus Database: 4556/12068 - Release Date: 04/20/16

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Alan Edwards
Cc: bj kristiansen; Kyle Wendtland; Andrew Kuhlmann
Subject: Re: Brook Mine EQC hearing request
Date: Wednesday, April 20, 2016 10:42:51 AM

Alan,

Thanks for your timely response.

Mark

On Wed, Apr 20, 2016 at 10:16 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> My answer is no unless Andrew feels otherwise. We will be an advisor to EQC no the matter and will answer questions there. Alan
>
> Sent from my iPhone
>
> On Apr 20, 2016, at 11:28 AM, bj kristiansen <bj.kristiansen@wyo.gov> wrote:
>
>> Gentlemen,
>>
>> I received a phone call from Jeff Baron of WWC Engineering about twenty minutes ago regarding the Brook Mine permit application. He asked if it would be possible for LQD to author a letter stating that the permit application for the Brook Mine is complete except for the surface owner issues still remaining related to Big Horn Coal and Padlock Ranch. The letter would essentially confirm that, by inference, the Mine Plan and Reclamation Plan are technically complete and acceptable. The information will then be submitted to the EQC in the hearing on surface owner issues. Mark and I believe the answer is a resounding No. However, we wanted to run the idea past you to insure that we are making the correct call on the request. Please contact Mark or me with your thoughts on the advisability of providing such a letter to Ramaco for their use with their EQC hearing.
>>
>> -bj
>>
>> Bj Kristiansen, PG
>>
>> Natural Resources Program Principal
>>
>> LQD-District III

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Shannon Anderson; Jill Morrison
Cc:	andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject:	Brooke Mining Permit Application
Date:	Wednesday, April 27, 2016 4:00:29 PM

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Shannon Anderson
To:	Alan Edwards; Jill Morrison; sanderson@powderriverbasin.org
Cc:	andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject:	RE: Brooke Mining Permit Application
Date:	Thursday, April 28, 2016 7:57:35 AM

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Jill Morrison
To: sanderson@powderriverbasin.org; Alan Edwards
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: RE: Brooke Mining Permit Application
Date: Thursday, April 28, 2016 1:14:32 PM

Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,

Jill Morrison
Organizer
Powder River Basin Resource Council
934 North Main
Sheridan, Wyoming 82801
(307) 672-5809 – work
(307) 751-5574 – cell
www.powderriverbasin.org

From: Shannon Anderson [mailto:sanderson@powderriverbasin.org]
Sent: Thursday, April 28, 2016 7:57 AM
To: 'Alan Edwards'; 'Jill Morrison'
Cc: 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
Subject: RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Alan Edwards
To: Jill Morrison
Cc: <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Re: Brooke Mining Permit Application
Date: Friday, April 29, 2016 8:35:55 AM

The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
> Jill Morrison
> Organizer
> Powder River Basin Resource Council
> 934 North Main
> Sheridan, Wyoming 82801
> (307) 672-5809 – work
> (307) 751-5574 – cell
> www.powderriverbasin.org
>
> ---
>
> **From:** Shannon Anderson [mailto:sanderson@powderriverbasin.org]
> **Sent:** Thursday, April 28, 2016 7:57 AM
> **To:** 'Alan Edwards'; 'Jill Morrison'
> **Cc:** 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
> **Subject:** RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Shannon Anderson
To: Alan Edwards; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: RE: Brooke Mining Permit Application
Date: Friday, April 29, 2016 8:47:58 AM

Thanks, Alan – we'll be in touch with Mark and BJ to schedule time in the DEQ file room for the landowners to review the permit application. Hoping by now it is in order with the new pages in place (it's been very hard on past file reviews to actually read a complete chapter given all of the new materials submitted through technical review rounds). Alternatively, if there is an electronic version of the revised permit application that would be ideal. I was able to make a copy of the original application CDs but it has significantly change since then.

Shannon

From: Alan Edwards
Sent: Friday, April 29, 2016 8:35 AM
To: Jill Morrison
Cc: <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Re: Brooke Mining Permit Application

The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
> Jill Morrison
> Organizer

Powder River Basin Resource Council
934 North Main
Sheridan, Wyoming 82801
(307) 672-5809 – work
(307) 751-5574 – cell
www.powderriverbasin.org

From: Shannon Anderson [mailto:sanderson@powderriverbasin.org]
Sent: Thursday, April 28, 2016 7:57 AM
To: 'Alan Edwards'; 'Jill Morrison'
Cc: 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
Subject: RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	Alan Edwards
Cc:	Jill Morrison; <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen
Subject:	Re: Brooke Mining Permit Application
Date:	Friday, April 29, 2016 9:02:13 AM

Alan,

Thanks for this update. I will work with BJ and Andrew to arrange for the appropriate Brook Mine permit application materials to be available for review.

Jill, Please contact BJ or I to arrange a date and time for a review of these materials.

Thanks,

Mark

On Fri, Apr 29, 2016 at 8:35 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.
>
> Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.
>
> Alan
>
> Sent from my iPhone
>
> On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:
>
>> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
>>
>> Jill Morrison
>>
>> Organizer
>>
>> Powder River Basin Resource Council

934 North Main

Sheridan, Wyoming 82801

(307) 672-5809 – work

(307) 751-5574 – cell

www.powderriverbasin.org

From: Shannon Anderson [mailto:sanderson@powderriverbasin.org]
Sent: Thursday, April 28, 2016 7:57 AM
To: 'Alan Edwards'; 'Jill Morrison'
Cc: 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
Subject: RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--

Alan Edwards

Deputy Director

Administrator, Abandoned Mine Lands

200 West 17th Street

Cheyenne, Wyoming 82002

Office: 307-777-7062

Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Shannon Anderson
Cc: Alan Edwards; Jill Morrison; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen
Subject: Re: Brooke Mining Permit Application
Date: Friday, April 29, 2016 9:05:18 AM

Shannon,

The Brook Mine permit application materials are in a single set of volumes containing all of the latest materials. I will check with BJ on the availability of an electronic copy of the combined permit application.

Thanks,
Mark

On Fri, Apr 29, 2016 at 8:47 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Thanks, Alan – we'll be in touch with Mark and BJ to schedule time in the DEQ file room for the landowners to review the permit application. Hoping by now it is in order with the new pages in place (it's been very hard on past file reviews to actually read a complete chapter given all of the new materials submitted through technical review rounds). Alternatively, if there is an electronic version of the revised permit application that would be ideal. I was able to make a copy of the original application CDs but it has significantly change since then.
>
> Shannon
>
> ---
>
> **From:** Alan Edwards
> **Sent:** Friday, April 29, 2016 8:35 AM
> **To:** Jill Morrison
> **Cc:** <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
> **Subject:** Re: Brooke Mining Permit Application
>
> The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
>
> Jill Morrison
>
> Organizer
>
> Powder River Basin Resource Council
>
> 934 North Main
>
> Sheridan, Wyoming 82801
>
> (307) 672-5809 – work
>
> (307) 751-5574 – cell
>
> www.powderriverbasin.org

From: Shannon Anderson [mailto:sanderson@powderriverbasin.org]
Sent: Thursday, April 28, 2016 7:57 AM
To: 'Alan Edwards'; 'Jill Morrison'
Cc: 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
Subject: RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I

thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--

Alan Edwards

Deputy Director

Administrator, Abandoned Mine Lands

200 West 17th Street

Cheyenne, Wyoming 82002

Office: 307-777-7062

Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Shannon Anderson
To: Mark Rogaczewski
Cc: jmorrison@powderriverbasin.org
Subject: RE: Brooke Mining Permit Application
Date: Friday, April 29, 2016 9:10:51 AM

Thanks, Mark – that is very helpful. Shannon

From: Mark Rogaczewski
Sent: Friday, April 29, 2016 9:05 AM
To: Shannon Anderson
Cc: Alan Edwards; Jill Morrison; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen
Subject: Re: Brooke Mining Permit Application

Shannon,

The Brook Mine permit application materials are in a single set of volumes containing all of the latest materials. I will check with BJ on the availability of an electronic copy of the combined permit application.

Thanks,
Mark

On Fri, Apr 29, 2016 at 8:47 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Thanks, Alan – we'll be in touch with Mark and BJ to schedule time in the DEQ file room for the landowners to review the permit application. Hoping by now it is in order with the new pages in place (it's been very hard on past file reviews to actually read a complete chapter given all of the new materials submitted through technical review rounds). Alternatively, if there is an electronic version of the revised permit application that would be ideal. I was able to make a copy of the original application CDs but it has significantly change since then.
>
> Shannon
>
> ---
>
> **From:** Alan Edwards
> **Sent:** Friday, April 29, 2016 8:35 AM
> **To:** Jill Morrison
> **Cc:** <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
> **Subject:** Re: Brooke Mining Permit Application
>
> The public comment process does not begin until the permit application is deemed

incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
> Jill Morrison
> Organizer
> Powder River Basin Resource Council
> 934 North Main
> Sheridan, Wyoming 82801
> (307) 672-5809 – work
> (307) 751-5574 – cell
> www.powderriverbasin.org
>
> ---
>
> **From:** Shannon Anderson [mailto:sanderson@powderriverbasin.org]
> **Sent:** Thursday, April 28, 2016 7:57 AM
> **To:** 'Alan Edwards'; 'Jill Morrison'
> **Cc:** 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
> **Subject:** RE: Brooke Mining Permit Application
>
> Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801

307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Kyle Wendtland
To: Mark Rogaczewski
Subject: Re: Brooke Mining Permit Application
Date: Friday, April 29, 2016 11:59:56 AM

Mark:

Thank you for organizing this for our public partners.

Kyle

On Fri, Apr 29, 2016 at 9:05 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Shannon,
>
> The Brook Mine permit application materials are in a single set of volumes containing all of the latest materials. I will check with BJ on the availability of an electronic copy of the combined permit application.
>
> Thanks,
> Mark
>
>
>
> On Fri, Apr 29, 2016 at 8:47 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
>
>> Thanks, Alan – we'll be in touch with Mark and BJ to schedule time in the DEQ file room for the landowners to review the permit application. Hoping by now it is in order with the new pages in place (it's been very hard on past file reviews to actually read a complete chapter given all of the new materials submitted through technical review rounds). Alternatively, if there is an electronic version of the revised permit application that would be ideal. I was able to make a copy of the original application CDs but it has significantly change since then.
>>
>>
>>
>> Shannon
>>
>>
>>
>> ---
>>
>> **From:** Alan Edwards
>> **Sent:** Friday, April 29, 2016 8:35 AM
>> **To:** Jill Morrison
>> **Cc:** <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
>> **Subject:** Re: Brooke Mining Permit Application
>>
>>
>>
>> The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result

we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
>
> Jill Morrison
>
> Organizer
>
> Powder River Basin Resource Council
>
> 934 North Main
>
> Sheridan, Wyoming 82801
>
> (307) 672-5809 – work
>
> (307) 751-5574 – cell
>
> www.powderriverbasin.org

From: Shannon Anderson [mailto:sanderson@powderriverbasin.org]
Sent: Thursday, April 28, 2016 7:57 AM
To: 'Alan Edwards'; 'Jill Morrison'
Cc: 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
Subject: RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--

Alan Edwards

Deputy Director

Administrator, Abandoned Mine Lands

200 West 17th Street

Cheyenne, Wyoming 82002

Office: 307-777-7062

Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality
Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Kyle Wendtland
Subject: Re: Brooke Mining Permit Application
Date: Friday, April 29, 2016 12:05:59 PM

You're welcome

On Fri, Apr 29, 2016 at 11:59 AM, Kyle Wendtland <kyle.wendtland@wyo.gov> wrote:

> Mark:
>
> Thank you for organizing this for our public partners.
>
> Kyle
>
> On Fri, Apr 29, 2016 at 9:05 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
> > Shannon,
> >
> > The Brook Mine permit application materials are in a single set of volumes containing all of the latest materials. I will check with BJ on the availability of an electronic copy of the combined permit application.
> >
> > Thanks,
> > Mark
> >
> > On Fri, Apr 29, 2016 at 8:47 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
> >
> > > Thanks, Alan – we'll be in touch with Mark and BJ to schedule time in the DEQ file room for the landowners to review the permit application. Hoping by now it is in order with the new pages in place (it's been very hard on past file reviews to actually read a complete chapter given all of the new materials submitted through technical review rounds). Alternatively, if there is an electronic version of the revised permit application that would be ideal. I was able to make a copy of the original application CDs but it has significantly change since then.
> > >
> > > Shannon
> > >
> > > ---
> > >
> > > **From:** Alan Edwards
> > > **Sent:** Friday, April 29, 2016 8:35 AM
> > > **To:** Jill Morrison
> > > **Cc:** <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
> > > **Subject:** Re: Brooke Mining Permit Application

The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
>
> Jill Morrison
>
> Organizer
>
> Powder River Basin Resource Council
>
> 934 North Main
>
> Sheridan, Wyoming 82801
>
> (307) 672-5809 – work
>
> (307) 751-5574 – cell
>
> www.powderriverbasin.org

From: Shannon Anderson [mailto:sanderson@powderriverbasin.org]
Sent: Thursday, April 28, 2016 7:57 AM
To: 'Alan Edwards'; 'Jill Morrison'
Cc: 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
Subject: RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--

Alan Edwards

Deputy Director

Administrator, Abandoned Mine Lands

200 West 17th Street

Cheyenne, Wyoming 82002

Office: 307-777-7062

Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kyle J. Wendtland
Administrator
Department of Environmental Quality

Land Quality Division
122 W. 25th Street
Herschler Building, 3W
Cheyenne, Wyoming 82002
307-777-7046
Kyle.Wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From:	Andrew Kuhlmann
To:	Alan Edwards
Cc:	Mark Rogaczewski; BJ Kristiansen
Subject:	Re: Brook Mining - Draft DEQ letter to EQC
Date:	Monday, May 02, 2016 9:01:47 AM

Alan,

It sounds like we are all comfortable with the letter's language and it is ready for Todd's review. Would you like me to send it to him?

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Shannon Anderson
To: Mark Rogaczewski
Cc: Jill Morrison; BJ Kristiansen
Subject: RE: Brooke Mining Permit Application
Date: Monday, May 02, 2016 10:34:26 AM

Hi Mark & BJ –

Jill and I would like to come in Wednesday morning if that works for you. We'd probably show up around 8:30 or 9. Other option would be tomorrow afternoon.

The main thing that would be helpful to have in electronic version are the maps and tables that will be too large to scan at your office, so if those are available, let us know.

Thanks - Shannon

From: Mark Rogaczewski [mailto:mark.rogaczewski@wyo.gov]
Sent: Friday, April 29, 2016 9:05 AM
To: Shannon Anderson
Cc: Alan Edwards; Jill Morrison; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen
Subject: Re: Brooke Mining Permit Application

Shannon,

The Brook Mine permit application materials are in a single set of volumes containing all of the latest materials. I will check with BJ on the availability of an electronic copy of the combined permit application.

Thanks,
Mark

On Fri, Apr 29, 2016 at 8:47 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Thanks, Alan – we'll be in touch with Mark and BJ to schedule time in the DEQ file room for the landowners to review the permit application. Hoping by now it is in order with the new pages in place (it's been very hard on past file reviews to actually read a complete chapter given all of the new materials submitted through technical review rounds). Alternatively, if there is an electronic version of the revised permit application that would be ideal. I was able to make a copy of the original application CDs but it has significantly change since then.

Shannon

From: Alan Edwards
Sent: Friday, April 29, 2016 8:35 AM
To: Jill Morrison
Cc: <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Re: Brooke Mining Permit Application

The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
> Jill Morrison
> Organizer
> Powder River Basin Resource Council
> 934 North Main
> Sheridan, Wyoming 82801
> (307) 672-5809 – work
> (307) 751-5574 – cell
> www.powderriverbasin.org
>
> ---
>
> **From:** Shannon Anderson [mailto:sanderson@powderriverbasin.org]
> **Sent:** Thursday, April 28, 2016 7:57 AM
> **To:** 'Alan Edwards'; 'Jill Morrison'
> **Cc:** 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
> **Subject:** RE: Brooke Mining Permit Application
>
> Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Shannon Anderson
Cc: Jill Morrison; BJ Kristiansen
Subject: Re: Brooke Mining Permit Application
Date: Monday, May 02, 2016 2:34:27 PM

Shannon,

LQD does not have electronic copies of the maps or tables. You can check out the application binders and have a professional printing/copier scan them for you. The LQD allows items to be checked out for 48 hours.

I have a meeting Wednesday morning from 8 - 10 a.m. but I will work with BJ to have the Brook Mine application materials available for you at 8:30 a.m.

Thanks,
Mark

On Mon, May 2, 2016 at 10:34 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

> Hi Mark & BJ –
>
> Jill and I would like to come in Wednesday morning if that works for you. We'd probably show up around 8:30 or 9. Other option would be tomorrow afternoon.
>
> The main thing that would be helpful to have in electronic version are the maps and tables that will be too large to scan at your office, so if those are available, let us know.
>
> Thanks - Shannon
>
> **From:** Mark Rogaczewski [mailto:mark.rogaczewski@wyo.gov]
> **Sent:** Friday, April 29, 2016 9:05 AM
> **To:** Shannon Anderson
> **Cc:** Alan Edwards; Jill Morrison; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen
> **Subject:** Re: Brooke Mining Permit Application
>
> Shannon,
>
> The Brook Mine permit application materials are in a single set of volumes containing all of the latest materials. I will check with BJ on the availability of an electronic copy of the combined permit application.

Thanks,
Mark

On Fri, Apr 29, 2016 at 8:47 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:

Thanks, Alan – we'll be in touch with Mark and BJ to schedule time in the DEQ file room for the landowners to review the permit application. Hoping by now it is in order with the new pages in place (it's been very hard on past file reviews to actually read a complete chapter given all of the new materials submitted through technical review rounds). Alternatively, if there is an electronic version of the revised permit application that would be ideal. I was able to make a copy of the original application CDs but it has significantly change since then.

Shannon

From: Alan Edwards
Sent: Friday, April 29, 2016 8:35 AM
To: Jill Morrison
Cc: <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Re: Brooke Mining Permit Application

The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,
>
> Jill Morrison
>
> Organizer
>
> Powder River Basin Resource Council
>
> 934 North Main
>
> Sheridan, Wyoming 82801
>
> (307) 672-5809 – work
>
> (307) 751-5574 – cell
>
> www.powderriverbasin.org

From: Shannon Anderson [mailto:sanderson@powderriverbasin.org]
Sent: Thursday, April 28, 2016 7:57 AM
To: 'Alan Edwards'; 'Jill Morrison'
Cc: 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
Subject: RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and

answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--

Alan Edwards

Deputy Director

Administrator, Abandoned Mine Lands

200 West 17th Street

Cheyenne, Wyoming 82002

Office: 307-777-7062

Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Mark Rogaczewski

Supervisor

LQD District III

2100 West 5th Street

Sheridan, WY 82801

307-675-5616

mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Shannon Anderson
To: Mark Rogaczewski
Cc: Jill Morrison; BJ Kristiansen
Subject: RE: Brooke Mining Permit Application
Date: Monday, May 02, 2016 3:12:03 PM

Thanks, Mark – sounds good.

Shannon Anderson
Powder River Basin Resource Council
934 N. Main St., Sheridan, WY 82801
307-672-5809 cell: 307-763-0995
sanderson@powderriverbasin.org
Join us at www.powderriverbasin.org
Follow us at https://twitter.com/PRBResCouncil

From: Mark Rogaczewski [mailto:mark.rogaczewski@wyo.gov]
Sent: Monday, May 02, 2016 2:34 PM
To: Shannon Anderson
Cc: Jill Morrison; BJ Kristiansen
Subject: Re: Brooke Mining Permit Application

Shannon,

LQD does not have electronic copies of the maps or tables. You can check out the application binders and have a professional printing/copier scan them for you. The LQD allows items to be checked out for 48 hours.

I have a meeting Wednesday morning from 8 - 10 a.m. but I will work with BJ to have the Brook Mine application materials available for you at 8:30 a.m.

Thanks,
Mark

On Mon, May 2, 2016 at 10:34 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Hi Mark & BJ –

Jill and I would like to come in Wednesday morning if that works for you. We'd probably show up around 8:30 or 9. Other option would be tomorrow afternoon.

The main thing that would be helpful to have in electronic version are the maps and tables that will be too large to scan at your office, so if those are available, let us know.

Thanks - Shannon

From: Mark Rogaczewski [mailto:mark.rogaczewski@wyo.gov]
Sent: Friday, April 29, 2016 9:05 AM
To: Shannon Anderson
Cc: Alan Edwards; Jill Morrison; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen
Subject: Re: Brooke Mining Permit Application

Shannon,

The Brook Mine permit application materials are in a single set of volumes containing all of the latest materials. I will check with BJ on the availability of an electronic copy of the combined permit application.

Thanks,
Mark

On Fri, Apr 29, 2016 at 8:47 AM, Shannon Anderson <sanderson@powderriverbasin.org> wrote:
Thanks, Alan – we'll be in touch with Mark and BJ to schedule time in the DEQ file room for the landowners to review the permit application. Hoping by now it is in order with the new pages in place (it's been very hard on past file reviews to actually read a complete chapter given all of the new materials submitted through technical review rounds). Alternatively, if there is an electronic version of the revised permit application that would be ideal. I was able to make a copy of the original application CDs but it has significantly change since then.

Shannon

From: Alan Edwards
Sent: Friday, April 29, 2016 8:35 AM
To: Jill Morrison
Cc: <sanderson@powderriverbasin.org>; andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Re: Brooke Mining Permit Application

The public comment process does not begin until the permit application is deemed incomplete. There are still outstanding issues so the permit is not complete. As a result we are not able to attend the meeting requested by PRBRC. You can drop be the office, however, to view the publicly available materials. You can contact Mark and BJ for scheduling. We will not be taking public comments or suggestions for change, though, until the public comment period. Also, Individuals always have the ability to request information from the applicant or their consultant.

Mark and PJ - please work with Andrew to determine what is public at this time. Also, we cannot receive public comments or suggestions for change until the public comment period.

Alan

Sent from my iPhone

On Apr 28, 2016, at 2:14 PM, Jill Morrison <jmorrison@powderriverbasin.org> wrote:

> Hi Alan, In addition to Shannon's comments we want to emphasize that the problem for landowners within the ½ mile boundary is that we have very limited time to review and understand the permit once it has entered the public comment

process. We are interested in meeting regarding all the portions of the permit that are deemed complete which we understand is everything except the surface owner consent issue. Please explain how landowners can get questions about all the other portions of the permit answered ASAP. Thanks,

Jill Morrison
Organizer
Powder River Basin Resource Council
934 North Main
Sheridan, Wyoming 82801
(307) 672-5809 – work
(307) 751-5574 – cell
www.powderriverbasin.org

From: Shannon Anderson [mailto:sanderson@powderriverbasin.org]
Sent: Thursday, April 28, 2016 7:57 AM
To: 'Alan Edwards'; 'Jill Morrison'
Cc: 'andrew kuhlmann'; 'Kyle Wendtland'; 'BJ Kristiansen'; 'Mark Rogaczewski'
Subject: RE: Brooke Mining Permit Application

Hi Alan, thanks for your response. I guess I am confused though as I thought it was only the adjudication chapter that was still technically incomplete. Are there other parts of the permit that are not yet final? We would like to meet about those other parts and see the mining and reclamation plans and look at the maps. Maybe we'll just need to bring in the landowners to the DEQ office to see those in the file room and answer the questions for ourselves. I'll be in touch with Mark to arrange a time to do that.

Thanks - Shannon

From: Alan Edwards [mailto:alan.edwards@wyo.gov]
Sent: Wednesday, April 27, 2016 4:00 PM
To: Shannon Anderson; Jill Morrison
Cc: andrew kuhlmann; Kyle Wendtland; BJ Kristiansen; Mark Rogaczewski
Subject: Brooke Mining Permit Application

Kyle forwarded your request for a meeting to discuss the Brook Mining permit application. Since we do not have the final documents yet, it will not be possible to meet as requested. When the permit application is complete and LQD has entered the public comment process we would be happy to honor your request at that time.

Alan

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street

Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Alan Edwards
To: Andrew Kuhlmann
Cc: Mark Rogaczewski; BJ Kristiansen
Subject: Re: Brook Mining - Draft DEQ letter to EQC
Date: Monday, May 02, 2016 8:05:10 PM

Yes. Copy me please. I will route an e-copy of the signed copy back to you. Alan

Sent from my iPhone

On May 2, 2016, at 9:01 AM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Alan,
>
> It sounds like we are all comfortable with the letter's language and it is ready for Todd's review. Would you like me to send it to him?
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue ***Please note the new mailing address**
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Kim Pandullo
Subject:	Brook Mining
Date:	Thursday, May 12, 2016 10:23:02 AM
Attachments:	2016-4-27 Draft Parfitt ltr to Council on order in lieu (3).docx

---

I would appreciate if you would prepare this letter for Todd's signature. It will be addressed to Jim Ruby at the EQC. Thanks. Alan

--

Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

RE: EQC Docket No. 16-4601 – Brook Mining Company's Request for Order in Lieu of Landowner Consent for Coal Mine Permit Application, TFN 6 2/025

Dear Hearing Examiner Clark,

The Department of Environmental Quality, Land Quality Division has conducted several rounds of technical review and commenting on the coal mine application from Brook Mining Company, LLC. At the completion of the Department's most recent rounds of review, the Department has determined that the application remains deficient, at this time, regarding the landowner consents required under Wyoming Statute § 35-11-406(b)(xi) and (xii). Specifically, the Department concluded that a specific deed that Brook Mining submitted with its application did not constitute sufficient landowner consent from two surface landowners whose properties sit inside the proposed permit area. As a result of the Department's technical comments, Brook Mining has come to the Council to seek an order that Brook Mining can use in its application to meet the statutory requirements.

Wyoming Statute § 35-11-406(b)(xi) and (xii) require certain consents from landowners in the proposed permit area, with different requirements for residential and agricultural landowners versus other types of surface landowners. Subsection 406(b)(xii) provides that, if an applicant cannot obtain consents required under that provision, the applicant can seek an order from the Council that the applicant can include in its application in lieu of consent from the non-consenting landowners. That subsection also lists the findings that the Council must make before it may issue such an order. If the Council were to issue an order, Brook Mining could then submit that order to the Department to become a part of the application. The Department would then determine if the application were complete and adequate.

The Department is not a party to a Council proceeding on a request for an order in lieu of consent. Accordingly, the Department does not take a position regarding whether or not the Council should grant the requested order in this case. The Council has discretion over this decision and the applicant and the affected landowners bear the responsibility for advocating for or against the issuance of an order.

While the Department is not a party, the Environmental Quality Act does place upon me the duty to serve as an advisor to the Council in this proceeding. Wyoming Statute § 35-11-109(a)(x) states that the Director shall serve as an advisor on matters that are not rules proposed by the Department or contested cases where the Department is a party. A request for an order in lieu of consent falls within this provision.

As a non-party who does not take a position on the merits of Brook Mining's request to the Council, the Department's role in this proceeding is only to advise the Council on any matters, should they arise, that could affect the Council or the Department beyond the question of whether to issue an order in lieu of consent in these particular circumstances. While I cannot say with any certainty today exactly what those matters might be, the infrequency of this type of request makes it foreseeable that the proceeding could raise issues that we cannot currently predict.

For this case, I have asked Deputy Director Alan Edwards to advise the Council on my behalf. Deputy Director Edwards has overseen the Department's technical review of this permit, and I believe his familiarity with the facts and history of that process place him in a good position to advise the Council, as necessary. I have also asked the Department's legal counsel from the Attorney General's Office to monitor this case and assist the Deputy Director.

I hereby request that the Council add Deputy Director Edwards and Senior Assistant Attorney General Andrew Kuhlmann to the list of persons in this case who receive electronic notifications of filings and who may make filings. It is possible that the Department may seek to provide oral advice at hearing or written advice prior to the hearing, subject of course to the parties' ability to respond to any advice the Department may provide.

Sincerely,

Todd Parfitt
Director

Cc: Brook Mining Company
Big Horn Coal Company
Padlock Ranch
Andrew Kuhlmann, Attorney General's Office

From:	Andrew Kuhlmann
To:	Hal Corbett
Subject:	DEQ letter to EQC re Docket 16-1601
Date:	Monday, May 16, 2016 3:16:12 PM
Attachments:	2016-5-13 DEQ ltr to EQC Dkt 16-1601.pdf

Hal,

I just left a message for you about the attached letter regarding Brook Mining's request to the EQC for an order in lieu of consent. Please give me a call when you have a chance and I can give you some more details and answer any questions you may have.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

DEQ

Matthew H. Mead, Governor

Todd Parfitt, Director

May 13, 2016

Mr. Jim Ruby, Executive Officer
Environmental Quality Council
122 W. 25th Street, Floor 1W
Room 1714
Cheyenne, WY 82002

RE: EQC Docket No. 16-4601 – Brook Mining Company's Request for Order in Lieu of Landowner Consent for Coal Mine Permit Application, TFN 6 2/025

Dear Hearing Examiner Clark,

The Department of Environmental Quality, Land Quality Division has conducted several rounds of technical review and commenting on the coal mine application from Brook Mining Company, LLC. At the completion of the Department's most recent rounds of review, the Department has determined that the application remains deficient, at this time, regarding the landowner consents required under Wyoming Statute § 35-11-406(b)(xi) and (xii). Specifically, the Department concluded that a specific deed that Brook Mining submitted with its application did not constitute sufficient landowner consent from two surface landowners whose properties sit inside the proposed permit area. As a result of the Department's technical comments, Brook Mining has come to the Council to seek an order that Brook Mining can use in its application to meet the statutory requirements.

Wyoming Statute § 35-11-406(b)(xi) and (xii) require certain consents from landowners in the proposed permit area, with different requirements for residential and agricultural landowners versus other types of surface landowners. Subsection 406(b)(xii) provides that, if an applicant cannot obtain consents required under that provision, the applicant can seek an order from the Council that the applicant can include in its application in lieu of consent from the non-consenting landowners. That subsection also lists the findings that the Council must make before it may issue such an order. If the Council were to issue an order, Brook Mining could then submit that order to the Department to become a part of the application. The Department would then determine if the application were complete and adequate.

The Department is not a party to a Council proceeding on a request for an order in lieu of consent. Accordingly, the Department does not take a position regarding whether or not the Council should grant the requested order in this case. The Council has discretion over this decision and the applicant and the affected landowners bear the responsibility for advocating for or against the issuance of an order.

While the Department is not a party, the Environmental Quality Act does place upon me the duty to serve as an advisor to the Council in this proceeding. Wyoming Statute § 35-11-109(a)(x) states that the Director shall serve as an advisor on matters that are not rules proposed by the Department or contested cases where the Department is a party. A request for an order in lieu of consent falls within this provision.

As a non-party who does not take a position on the merits of Brook Mining's request to the Council, the Department's role in this proceeding is only to advise the Council on any matters, should they arise, that could affect the Council or the Department beyond the question of whether to issue an order in lieu of consent in these particular circumstances. While I cannot say with any certainty today exactly what those matters might be, the infrequency of this type of request makes it foreseeable that the proceeding could raise issues that we cannot currently predict.

For this case, I have asked Deputy Director Alan Edwards to advise the Council on my behalf. Deputy Director Edwards has overseen the Department's technical review of this permit, and I believe his familiarity with the facts and history of that process place him in a good position to advise the Council, as necessary. I have also asked the Department's legal counsel from the Attorney General's Office to monitor this case and assist the Deputy Director.

I hereby request that the Council add Deputy Director Edwards and Senior Assistant Attorney General Andrew Kuhlmann to the list of persons in this case who receive electronic notifications of filings and who may make filings. It is possible that the Department may seek to provide oral advice at hearing or written advice prior to the hearing, subject of course to the parties' ability to respond to any advice the Department may provide.

Sincerely,

Todd Parfitt
Director

cc: Brook Mining Company
Big Horn Coal Company
Padlock Ranch
Andrew Kuhlmann, Attorney General's Office

From:	Jim Ruby
To:	lboomgaarden@crowleyfleck.com; jwacker@crowleyfleck.com; wdrake@crowleyfleck.com; hal@lonabaugh.com; mistee@lonabaugh.com; insutphin@hollandhart.com; Andrew Kuhlmann; jmkelley@hollandhart.com
Subject:	June 7th hearing in Docket 16-1601 In Re Brook Mine
Date:	Monday, May 23, 2016 11:27:04 AM

Dear Counsel:

I received a call from Lynn today with a question about the June 7th hearing. The docketing system had an error and sent out 4 notices of that hearing. We than tried to correct three of them but it seems that you may have gotten 4 notices of cancellation. I am very sorry for the confusion. The hearing on June 7, 2016 at 1:30 P.M. in the Board of Equalization Board Room in the Herschler Building, 122 West 25th St. Cheyenne WY. is still occurring. If you can appear in person that is great if you cannot please give us a contact number by June 6 2016 that we can call you on. If any of you have any other questions please feel free to call or email me.

Sincerely,

Jim Ruby

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Isaac Sutphin
To:	Jim Ruby; lboomgaarden@crowleyfleck.com; jwacker@crowleyfleck.com; wdrake@crowleyfleck.com; hal@lonabaugh.com; mistee@lonabaugh.com; Andrew Kuhlmann; Jan Kelley
Subject:	RE: June 7th hearing in Docket 16-1601 In Re Brook Mine
Date:	Tuesday, May 24, 2016 11:11:51 AM
Attachments:	image001.gif

Mr. Ruby,

Thank you for the clarification. Brook will attend the June 7 hearing in person.

IS

Isaac N. Sutphin, P.C.
Partner

CONFIDENTIALITY NOTICE: This message is confidential and may be privileged. If you believe that this email has been sent to you in error, please reply to the sender that you received the message in error; then please delete this e-mail. Thank you.

From: Jim Ruby [mailto:jim.ruby@wyo.gov]
Sent: Monday, May 23, 2016 11:27 AM
To: lboomgaarden@crowleyfleck.com; jwacker@crowleyfleck.com; wdrake@crowleyfleck.com; hal@lonabaugh.com; mistee@lonabaugh.com; Isaac Sutphin; Andrew Kuhlmann; Jan Kelley
Subject: June 7th hearing in Docket 16-1601 In Re Brook Mine

Dear Counsel:

I received a call from Lynn today with a question about the June 7th hearing. The docketing system had an error and sent out 4 notices of that hearing. We than tried to correct three of them but it seems that you may have gotten 4 notices of cancellation. I am very sorry for the confusion. The hearing on June 7, 2016 at 1:30 P.M. in the Board of Equalization Board Room in the Herschler Building, 122 West 25th St. Cheyenne WY. is still occurring. If you can appear in person that is great if you cannot please give us a contact number by June 6 2016 that we can call you on. If any of you have any other questions please feel free to call or email me.

Sincerely,

Jim Ruby

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

HOLLAND&HART LLP

THE LAW OUT WEST

From:	Lynne Boomgaarden
To:	Jim Ruby; Jenny Wacker; Wendy Drake; hal@lonabaugh.com; mistee@lonabaugh.com; insutphin@hollandhart.com; Andrew Kuhlmann; jmkelley@hollandhart.com
Cc:	Maria-Nicolle Beringer
Subject:	RE: June 7th hearing in Docket 16-1601 In Re Brook Mine
Date:	Thursday, May 26, 2016 4:33:34 PM
Attachments:	image001.jpg

Mr. Ruby –

This is to confirm that I will appear on June 7th in person. Ms. Maria-Nicolle Beringer, in house counsel with Big Horn Coal, would like to be contacted by telephone at (801) 539-3804.

Thank you,

Lynne

Lynne Boomgaarden

Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

From: Jim Ruby [mailto:jim.ruby@wyo.gov]
Sent: Monday, May 23, 2016 11:27 AM
To: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Jenny Wacker <jwacker@crowleyfleck.com>; Wendy Drake <wdrake@crowleyfleck.com>; hal@lonabaugh.com; mistee@lonabaugh.com; insutphin@hollandhart.com; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; jmkelley@hollandhart.com
Subject: June 7th hearing in Docket 16-1601 In Re Brook Mine

Dear Counsel:

I received a call from Lynn today with a question about the June 7th hearing. The docketing system had an error and sent out 4 notices of that hearing. We than tried to correct three of them but it seems that you may have gotten 4 notices of cancellation. I am very sorry for the confusion. The hearing on June 7, 2016 at 1:30 P.M. in the Board of Equalization Board Room in the Herschler Building, 122 West 25th St. Cheyenne WY. is still occurring. If you

can appear in person that is great if you cannot please give us a contact number by June 6 2016 that we can call you on. If any of you have any other questions please feel free to call or email me.

Sincerely,

Jim Ruby

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From: Andrew Kuhlmann
To: Lynne Boomgaarden
Subject: EQC 16-1601 - Brook Mine request for order
Date: Wednesday, June 01, 2016 5:28:03 PM

Lynne,

I would like to talk to you tomorrow morning before 10, if possible, about the Brook Mining case and the hearing the EQC scheduled for next week. Please let me know if there is a particular time that works well for me to call you or vice versa.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

From:	Andrew Kuhlmann
To:	Hal Corbett
Subject:	EQC 16-1601 - Brook Mine request for order
Date:	Wednesday, June 01, 2016 5:28:45 PM

Hal,

I would like to talk to you tomorrow morning before 10, if possible, about the Brook Mining case and the hearing the EQC scheduled for next week. Please let me know if there is a particular time that works well for me to call you or vice versa.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

From: Lynne Boomgaarden
To: Andrew Kuhlmann
Subject: RE: EQC 16-1601 - Brook Mine request for order
Date: Wednesday, June 01, 2016 6:13:52 PM
Attachments: image001.jpg

Andrew –
I am in the office now, if you are still around feel free to call. Otherwise, I have to go to the Board of Land Commissioners meeting in the morning – not sure how long that will take. Would it be possible for you to meet me in the Herschler Bldg at 8 a.m. or shortly thereafter – I should have some time to visit while they are conducting the SLIB business and before they convene as the Land Board? If not, you can try my cell number (below) and I'll answer if I can.
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

From: Andrew Kuhlmann [mailto:andrew.kuhlmann@wyo.gov]
Sent: Wednesday, June 01, 2016 5:28 PM
To: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>
Subject: EQC 16-1601 - Brook Mine request for order

Lynne,

I would like to talk to you tomorrow morning before 10, if possible, about the Brook Mining case and the hearing the EQC scheduled for next week. Please let me know if there is a particular time that works well for me to call you or vice versa.

Thanks,
Andrew

--

Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue ***Please note the new mailing address**
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Shannon Payne
To:	Todd Parfitt; Alan Edwards; Andrew Kuhlmann
Subject:	Filing with EQC - Brook Mine Application (16-1601)
Date:	Monday, June 06, 2016 2:56:18 PM
Attachments:	2016-6-6-DEQ Response to Order for Hearing.pdf

Good Afternoon,
The attached document was just filed with the EQC

--

Shannon N. Payne
Paralegal
State of Wyoming
Office of Attorney General
Water and Natural Resources
2320 Capitol Ave.
Cheyenne, WY 82002
Office: 307-777-3536
Fax: 307-777-3542

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Office of the Attorney General

Governor
Matthew H. Mead

Attorney General
Peter K. Michael

Water and Natural Resources Division
Kendrick Building
2320 Capitol Avenue
Cheyenne, Wyoming 82002
307-777-6946 Telephone
307-777-3542 Fax

Chief Deputy Attorney General
John G. Knepper

Division Deputy
James Kaste

June 6, 2016

Mr. Aaron Clark
Hearing Examiner
Wyoming Environmental Quality Council
122 W. 25th Street
Herschler Bldg., 1W, Room 1714
Cheyenne, WY 82002

RE: DEQ's Response to May 20, 2016, *Order for Hearing* in *In re Brook Mine Application*, EQC Docket No. 16-1601

Dear Hearing Examiner Clark,

The Department of Environmental Quality and Director Parfitt have received and reviewed your *Order for Hearing*, entered May 20, 2016. I am writing to you in response to the order on Director Parfitt's behalf.

The order set a hearing for June 7, 2016, to discuss two issues. The first regards the Director's duty to serve as an advisor to the Council in this matter. The second is regarding whether the Department has any evidence that would assist the Council in making its determinations on the requested order in lieu of landowner consent.

As noted in your order and in Director Parfitt's letter to you, dated May 13, 2016, Wyoming Statute § 35-11-109(a)(x) in the Environmental Quality Act directs him to, "[s]erve as an advisor to the council, without vote, on all matters other than the consideration of rules proposed by the department or contested case proceedings in which the department is a party." In practice, matters of this kind very rarely come before the Council. Fortunately, although an infrequent event, the Director's involvement (or in this

case, his designee's involvement) is a simple matter and should not complicate the Council's proceedings.

The Act uses the term, advisor. This differentiates the Director's role and advice from a witness giving testimony or a party advocating a position. Because of this limited role, the only principle that the Council needs to keep in mind with regard to the Director's advice is to allow the parties an opportunity to make statements in response to advice given by the Director or requests for advice made by the Council. This includes the opportunity for the parties to place objections on the record. To ensure that the parties have this opportunity, the Director's advice and the Council's requests for advice should be provided prior to the Council closing the record and beginning its deliberations.

To the extent that the Department has any evidence that may be necessary for the Council's determinations in this case, the parties have not yet requested evidence from the Department. The Department understands that the discovery request deadline in this case has already passed. However, the Department remains ready to assist the parties and the Council in accordance with the Council's orders in this case, its rules of practice and procedure, and the Wyoming Rules of Civil Procedure.

According to the *Order for Hearing*, the hearing on June 7 will be to discuss procedures for this case, similar to the purposes of a pre-hearing scheduling conference. The hearing is not evidentiary in nature, and therefore witnesses are not required or appropriate to resolve the issues involved. As such, I will be attending the hearing to represent the Director and the Department and to assist the Council in considering these procedural matters.

The *Order for Hearing* ordered Director Parfitt to "appear and be present in person" at the June 7 hearing. The Council does not have a roving show cause authority to demand the presence of any individual it chooses. The Council's subpoena authority is limited to parties, witnesses, and the production of documents, and is governed by the Wyoming Administrative Procedures Act and the Rules of Civil Procedure. The Director is not a party or a witness in this case and, in any event, the *Order for Hearing* did not purport to be a subpoena or contain the required information under the Rules of Civil Procedure to constitute a subpoena. Therefore, the Director has been advised by counsel that he is not legally required to attend the hearing. However, the Director has indicated that he will attend.

Fortunately for all involved, the issues scheduled for the upcoming hearing are straightforward. I look forward to a productive discussion of them with you and counsel for the parties.

Sincerely,

Andrew J. Kuhlmann
Senior Assistant Attorney General
Counsel for the Department of Environmental Quality

cc: Todd Parfitt, DEQ Director (via email)
Alan Edwards, DEQ Deputy Director (via email)
Brook Mining Company, c/o Isaac Sutphin, Holland & Hart LLP (via electronic filing)
Big Horn Coal Company, c/o Lynne Boomgaarden, Crowley Fleck PLLP (via electronic filing)
Padlock Ranch Company, c/o Mistee Elliott and Hal Corbett, Lonabaugh and Riggs, LLP (via electronic filing)

From: BJ Kristiansen
To: Andrew Kuhlmann; Mark Rogaczewski; Alan Edwards
Subject: Re: Brook Mining Petition for an Order in Lieu of Consent
Date: Thursday, June 09, 2016 6:31:47 AM

Andrew,

I am available all day so pick the time based on Mark's availability.

-bj

On Wed, Jun 8, 2016 at 4:37 PM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> **Privileged and Confidential**
> **Attorney-Client Communication**
>
> Mark and BJ,
>
> If you are in tomorrow, I would like to give you a quick update about the EQC hearing yesterday and how that affects our "advisor" role at the upcoming proceedings on Brook Mining's request for an order in lieu of consent. If you could give me a call, that would be great. I am pretty busy between 9:45 and 1:30, but I should be available before and after that time period.
>
> I think we may also want to set up a call early next week with Alan to have a more detailed dicussion about what is likely to come up at the dispositive motions hearing on the 15th. Maybe we can find a time that works when we talk tomorrow.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: andrew.kuhlmann@wyo.gov; BJ Kristiansen; Mark Rogaczewski
Subject: Invitation: Brook Mine EQC Call @ Thu Jun 9, 2016 9am - 9:30am (Andrew Kuhlmann)
Date: Thursday, June 09, 2016 7:16:11 AM
Attachments: invite.ics

Brook Mine EQC Call

more details »

BJ will meet in Mark's office

When	Thu Jun 9, 2016 9am – 9:30am Mountain Time
Where	Rogo will call Andrew (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk
Calendar	Andrew Kuhlmann
Who	• Mark Rogaczewski - organizer • andrew.kuhlmann@wyo.gov • BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_110.ics (1290 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: bj.kristiansen@wyo.gov; andrew.kuhlmann@wyo.gov; Mark Rogaczewski
Subject: Invitation: Brook Mine EQC Call @ Thu Jun 9, 2016 9am - 9:30am (bjarne.kristiansen@wyo.gov)
Date: Thursday, June 09, 2016 7:16:12 AM
Attachments: invite.ics

Brook Mine EQC Call

more details »

BJ will meet in Mark's office

When	Thu Jun 9, 2016 9am – 9:30am Mountain Time
Where	Rogo will call Andrew (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk
Calendar	bjarne.kristiansen@wyo.gov
Who	• Mark Rogaczewski - organizer • andrew.kuhlmann@wyo.gov • BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_111.ics (1289 Bytes) cannot be converted to PDF format.

From:	Mark Rogaczewski
To:	Andrew Kuhlmann
Cc:	BJ Kristiansen; Alan Edwards
Subject:	Re: Brook Mining Petition for an Order in Lieu of Consent
Date:	Thursday, June 09, 2016 7:16:56 AM

Andrew,

I sent a meeting request for 9 - 9:30 a.m. If this does not work for you. BJ and I have time from 2 - 3:30 p.m. this afternoon.

Mark

On Wed, Jun 8, 2016 at 4:37 PM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> **Privileged and Confidential**
> **Attorney-Client Communication**
>
> Mark and BJ,
>
> If you are in tomorrow, I would like to give you a quick update about the EQC hearing yesterday and how that affects our "advisor" role at the upcoming proceedings on Brook Mining's request for an order in lieu of consent. If you could give me a call, that would be great. I am pretty busy between 9:45 and 1:30, but I should be available before and after that time period.
>
> I think we may also want to set up a call early next week with Alan to have a more detailed dicussion about what is likely to come up at the dispositive motions hearing on the 15th. Maybe we can find a time that works when we talk tomorrow.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski; Andrew Kuhlmann
Subject: Invitation: Discussion on Brook Mine @ Tue Jun 14, 2016 8:30am - 9:30am (bjarne.kristiansen@wyo.gov)
Date: Thursday, June 09, 2016 1:20:03 PM
Attachments: invite.ics

Discussion on Brook Mine

more details »

Andrew will call and conference in everyone

When Tue Jun 14, 2016 8:30am – 9:30am Mountain Time

Where By phone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/discussion-on

Calendar bjarne.kristiansen@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- BJ Kristiansen
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_112.ics (1433 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; Mark Rogaczewski; BJ Kristiansen; Andrew Kuhlmann
Subject: Invitation: Discussion on Brook Mine @ Tue Jun 14, 2016 8:30am - 9:30am (alan.edwards@wyo.gov)
Date: Thursday, June 09, 2016 1:20:03 PM
Attachments: invite.ics

Discussion on Brook Mine

more details »

Andrew will call and conference in everyone

When Tue Jun 14, 2016 8:30am – 9:30am Mountain Time

Where By phone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/discussion-on

Calendar alan.edwards@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- Mark Rogaczewski
- BJ Kristiansen
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_113.ics (1430 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; alan.edwards@wyo.gov; BJ Kristiansen; Andrew Kuhlmann
Subject: Invitation: Discussion on Brook Mine @ Tue Jun 14, 2016 8:30am - 9:30am (mark.rogaczewski@wyo.gov)
Date: Thursday, June 09, 2016 1:20:03 PM
Attachments: invite.ics

Discussion on Brook Mine

more details »

Andrew will call and conference in everyone

When Tue Jun 14, 2016 8:30am – 9:30am Mountain Time

Where By phone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/discussion-on

Calendar mark.rogaczewski@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- Mark Rogaczewski
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_114.ics (1435 Bytes) cannot be converted to PDF format.

From:	Jim Ruby
To:	Lynne Boomgaarden; Andrew Kuhlmann; hal@lonabaugh.com; insutphin@hollandhart.com; mistee@lonabaugh.com
Subject:	Brook Mine Questions
Date:	Wednesday, June 15, 2016 9:36:09 AM

Dear Counsel:

Below are the questions that the Council will discuss today regarding the Brook Mine matter.

1. What is the status of the Brook Mine permit review including all steps needed to finalize approval?
2. Are there any parts of the mine plan which DEQ has determined to be incomplete or inadequate?
3. Is consent from the landowners the only deficiency DEQ has identified with the current reclamation plan or have other parts/requirements been determined to be incomplete or inadequate?
4. Can future public comments received by DEQ result in material changes to either the current mine plan or the current reclamation plan?
5. When will DEQ determine the reclamation bond requirements for this application and when is the applicant required to submit the bond?

Jim Ruby

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: alan.edwards@wyo.gov; andrew.kuhlmann@wyo.gov; Mark Rogaczewski
Subject: Invitation: Brook Mine CHIA @ Wed Jun 29, 2016 1pm - 2pm (alan.edwards@wyo.gov)
Date: Monday, June 27, 2016 2:02:59 PM
Attachments: invite.ics

Brook Mine CHIA

more details »

Alan,

BJ is out of the office on Wednesday attending a meeting in Casper. I will be available to discuss the CHIA process.

Mark

When	Wed Jun 29, 2016 1pm – 2pm Mountain Time
Video call	https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk
Calendar	alan.edwards@wyo.gov
Who	• Mark Rogaczewski - organizer • andrew.kuhlmann@wyo.gov • alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_115.ics (1374 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: andrew.kuhlmann@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski
Subject: Invitation: Brook Mine CHIA @ Wed Jun 29, 2016 1pm - 2pm (Andrew Kuhlmann)
Date: Monday, June 27, 2016 2:02:59 PM
Attachments: invite.ics

Brook Mine CHIA

more details »

Alan,

BJ is out of the office on Wednesday attending a meeting in Casper. I will be available to discuss the CHIA process.

Mark

When	Wed Jun 29, 2016 1pm – 2pm Mountain Time
Video call	https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk
Calendar	Andrew Kuhlmann
Who	• Mark Rogaczewski - organizer • alan.edwards@wyo.gov • andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_116.ics (1378 Bytes) cannot be converted to PDF format.

From: bj.kristiansen@wyo.gov
To: matthew.kunze@wyo.gov
Subject: Brook Mine - Invitation to collaborate
Date: Tuesday, June 28, 2016 10:27:32 AM

BJ Kristiansen has invited you to **contribute to** the following shared folder:

Brook Mine

Open

This is a courtesy copy of an email for your record only. It's not the same email your collaborators received. Click here to learn more.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Brook Mine - Invitation to collaborate
Date: Tuesday, June 28, 2016 10:32:18 AM

Thanks Bj…I was able to download the file and open it and bring it into ArcGIS.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Jun 28, 2016 at 10:27 AM, BJ Kristiansen (via Google Drive) <drive-shares-noreply@google.com> wrote:

> BJ Kristiansen has invited you to **contribute to** the following shared folder:
>
> Brook Mine
>
> Open
>
> Google Drive: Have all your files within reach from any device.

From: Mark Rogaczewski
To: alan.edwards@wyo.gov; andrew.kuhlmann@wyo.gov; Mark Rogaczewski
Subject: Updated Invitation: Brook Mine CHIA @ Fri Jul 1, 2016 10am - 11am (alan.edwards@wyo.gov)
Date: Wednesday, June 29, 2016 1:07:45 PM
Attachments: invite.ics

This event has been changed.

Brook Mine CHIA

more details »

Alan,

BJ is out of the office on Wednesday attending a meeting in Casper. I will be available to discuss the CHIA process.

Mark

When	**Changed:** Fri Jul 1, 2016 10am – 11am Mountain Time
Video call	https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk
Calendar	alan.edwards@wyo.gov
Who	• Mark Rogaczewski - organizer • andrew.kuhlmann@wyo.gov • alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for updated invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_117.ics (1374 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: andrew.kuhlmann@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski
Subject: Updated Invitation: Brook Mine CHIA @ Fri Jul 1, 2016 10am - 11am (Andrew Kuhlmann)
Date: Wednesday, June 29, 2016 1:07:45 PM
Attachments: invite.ics

This event has been changed.

Brook Mine CHIA

more details »

Alan,

BJ is out of the office on Wednesday attending a meeting in Casper. I will be available to discuss the CHIA process.

Mark

When **Changed:** Fri Jul 1, 2016 10am – 11am Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar Andrew Kuhlmann

Who
- Mark Rogaczewski - organizer
- andrew.kuhlmann@wyo.gov
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for updated invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_118.ics (1378 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: bj.kristiansen@wyo.gov; andrew.kuhlmann@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski
Subject: Invitation: Brook Mine CHIA @ Tue Jul 5, 2016 11am - 12pm (bjarne.kristiansen@wyo.gov)
Date: Friday, July 01, 2016 10:16:34 AM
Attachments: invite.ics

Brook Mine CHIA

more details »

Alan,

BJ is out of the office on Wednesday attending a meeting in Casper. I will be available to discuss the CHIA process.

Mark

When Tue Jul 5, 2016 11am – 12pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar bjarne.kristiansen@wyo.gov

Who
- Mark Rogaczewski - organizer
- andrew.kuhlmann@wyo.gov
- BJ Kristiansen
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_119.ics (1377 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: andrew.kuhlmann@wyo.gov; alan.edwards@wyo.gov; BJ Kristiansen; Mark Rogaczewski
Subject: Updated Invitation: Brook Mine CHIA @ Tue Jul 5, 2016 11am - 12pm (Andrew Kuhlmann)
Date: Friday, July 01, 2016 10:16:35 AM
Attachments: invite.ics

This event has been changed.

Brook Mine CHIA

more details »

Alan,

BJ is out of the office on Wednesday attending a meeting in Casper. I will be available to discuss the CHIA process.

Mark

When **Changed:** Tue Jul 5, 2016 11am – 12pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar Andrew Kuhlmann

Who
- Mark Rogaczewski - organizer
- andrew.kuhlmann@wyo.gov
- alan.edwards@wyo.gov
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for updated invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_120.ics (1378 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: alan.edwards@wyo.gov; BJ Kristiansen; andrew.kuhlmann@wyo.gov; Mark Rogaczewski
Subject: Updated Invitation: Brook Mine CHIA @ Tue Jul 5, 2016 11am - 12pm (alan.edwards@wyo.gov)
Date: Friday, July 01, 2016 10:16:36 AM
Attachments: invite.ics

This event has been changed.

Brook Mine CHIA

more details »

Alan,

BJ is out of the office on Wednesday attending a meeting in Casper. I will be available to discuss the CHIA process.

Mark

When **Changed:** Tue Jul 5, 2016 11am – 12pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar alan.edwards@wyo.gov

Who
- Mark Rogaczewski - organizer
- alan.edwards@wyo.gov
- BJ Kristiansen
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for updated invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_121.ics (1374 Bytes) cannot be converted to PDF format.

From: Mark Rogaczewski
To: alan.edwards@wyo.gov; BJ Kristiansen; andrew.kuhlmann@wyo.gov; Mark Rogaczewski
Subject: Updated Invitation: Brook Mine CHIA @ Tue Jul 5, 2016 11am - 12pm (alan.edwards@wyo.gov)
Date: Friday, July 01, 2016 10:16:40 AM
Attachments: invite.ics

This event has been changed.

Brook Mine CHIA

more details »

Alan,

BJ is out of the office on Wednesday attending a meeting in Casper. I will be available to discuss the CHIA process.

Mark

When **Changed:** Tue Jul 5, 2016 11am – 12pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/mark-rogaczewsk

Calendar alan.edwards@wyo.gov

Who
- Mark Rogaczewski - organizer
- alan.edwards@wyo.gov
- BJ Kristiansen
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for updated invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_122.ics (1374 Bytes) cannot be converted to PDF format.

From: BJ Kristiansen
To: Matthew Kunze
Subject: Re: CHIA questions
Date: Tuesday, July 05, 2016 9:34:02 AM

Matt,

That is exactly what I needed. I appreciate your quick response since I have an 11:00 call with Alan Edwards on the Brook Mine permit application and wanted to be able to put the CHIA in perspective.

On Tue, Jul 5, 2016 at 9:23 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Bj,
>
> To answer your first question, in past practice the CHIA has not been an explicit part of the public notice and comment process - it has followed a process similar to that of finishing the SDD where must be done prior to approval. When we finish the draft CHIA, it is sent to the WQD and SEO for a 30-day review to determine if they concur with the finding of no material damage to the hydrologic balance outside the mine permit boundary. This has been long-standing practice and originates from a 1996 "Statement of Material Damage" memo that was written by the DEQ and the SEO. Once we finalize the CHIA (obtain concurrence and signatures-see second paragraph below), it is placed upon the TFN shelf and at that point in theory could be subject to public review. However there is no separate notice or comment period issued once the final CHIA is completed; any public comment would have to occur within the timeframe of the final notice issued for the permit application. In my experience we have never had public comment on a CHIA that occurred within the public notice period.
>
> On your second question, approval of the permit must wait until the final CHIA is issued. As I mentioned, to finalize the CHIA, it must receive concurrence by the WQD and the SEO. If the CHIA reviewers disagree with the overall findings and have major items of contention, we would have to initiate a discussion between the LQD and the permittee on making possible changes to the permit application. In my experience this has rarely happened; we are typically able to address any review comments within the CHIA itself. As the final step, the CHIA must be signed by the DEQ Director and the State Engineer before it is considered final. Our goal is to always have the final CHIA completed prior to the end of the public notice period so it is not holding up possible approval.
>
> Hope this helps; if any other questions come up, please let me know.
>
> Matt
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 7:32 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I have a few questions about the CHIA process that I still am not clear about. One, is the CHIA subject to public notice and comment like a mine permit application? And if this is the case, can it be changed based on public comment or objection? Secondly, do any objections to the CHIA stop the permitting process, so that the permit must wait for the final CHIA?
>
> -bj
>
> --
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: CHIA questions
Date: Tuesday, July 05, 2016 9:36:26 AM

Ok sounds good...if any thing else comes up please let me know.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 9:34 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> That is exactly what I needed. I appreciate your quick response since I have an 11:00 call with Alan Edwards on the Brook Mine permit application and wanted to be able to put the CHIA in perspective.
>
> On Tue, Jul 5, 2016 at 9:23 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Bj,
>>
>> To answer your first question, in past practice the CHIA has not been an explicit part of the public notice and comment process - it has followed a process similar to that of finishing the SDD where must be done prior to approval. When we finish the draft CHIA, it is sent to the WQD and SEO for a 30-day review to determine if they concur with the finding of no material damage to the hydrologic balance outside the mine permit boundary. This has been long-standing practice and originates from a 1996 "Statement of Material Damage" memo that was written by the DEQ and the SEO. Once we finalize the CHIA (obtain concurrence and signatures-see second paragraph below), it is placed upon the TFN shelf and at that point in theory could be subject to public review. However there is no separate notice or comment period issued once the final CHIA is completed; any public comment would have to occur within the timeframe of the final notice issued for the permit application. In my experience we have never had public comment on a CHIA that occurred within the public notice period.
>>
>> On your second question, approval of the permit must wait until the final CHIA is issued. As I mentioned, to finalize the CHIA, it must receive concurrence by the WQD and the SEO. If the CHIA reviewers disagree with the overall findings and have major items of contention, we would have to initiate a discussion between the LQD and the permittee on making possible changes to the permit application. In my experience this has rarely happened; we are typically able to address any review comments within the CHIA itself. As the final step, the CHIA must be signed by the DEQ Director and the State Engineer before it is considered final. Our goal is to always have the final CHIA completed prior to

the end of the public notice period so it is not holding up possible approval.

Hope this helps; if any other questions come up, please let me know.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 7:32 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I have a few questions about the CHIA process that I still am not clear about. One, is the CHIA subject to public notice and comment like a mine permit application? And if this is the case, can it be changed based on public comment or objection? Secondly, do any objections to the CHIA stop the permitting process, so that the permit must wait for the final CHIA?
>
> -bj
>
> --
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal

Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Jim Ruby
To:	Andrew Kuhlmann; Lynne Boomgaarden; insutphin@hollandhart.com; hal@lonabaugh.com; mistee@lonabaugh.com
Subject:	Brook Mine LLC
Date:	Tuesday, July 05, 2016 9:58:41 AM

Dear Counsel:

Do any of you have a preference on where the final hearing is held. Because of recent budget cutting action by the Governor and the Legislature the EQC must be mindful of our expenditures so Cheyenne is the best location for the Council to minimize costs related to staff travel. If you have an objection to holding the final hearing in Cheyenne and have a preferred location please let me know as soon as possible.

Have a great week.

Jim

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Lynne Boomgaarden
To:	Jim Ruby
Cc:	Andrew Kuhlmann; insutphin@hollandhart.com; hal@lonabaugh.com; mistee@lonabaugh.com; Maria-Nicolle Beringer
Subject:	Re: Brook Mine LLC
Date:	Tuesday, July 05, 2016 11:35:20 AM

Mr. Ruby - Big Horn Coal has no objection to Cheyenne.
Thank you,
Lynne

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

On Jul 5, 2016, at 9:58 AM, Jim Ruby <jim.ruby@wyo.gov> wrote:

> Dear Counsel:
>
> Do any of you have a preference on where the final hearing is held. Because of recent budget cutting action by the Governor and the Legislature the EQC must be mindful of our expenditures so Cheyenne is the best location for the Council to minimize costs related to staff travel. If you have an objection to holding the final hearing in Cheyenne and have a preferred location please let me know as soon as possible.
>
> Have a great week.
>
> Jim
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: Re: CHIA questions
Date: Tuesday, July 05, 2016 12:29:08 PM

OK Matt, more questions...

1) What statutes, rules, or regulations dictate that the CHIA be performed? Is this a Federal or State mandate?
2) Is the CHIA supposed to be publically announced or, as you indicated, it has no public comment period?

That's it for now.

On Tue, Jul 5, 2016 at 9:36 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Ok sounds good...if any thing else comes up please let me know.
>
> Matt
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
> On Tue, Jul 5, 2016 at 9:34 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
> > Matt,
> >
> > That is exactly what I needed. I appreciate your quick response since I have an 11:00 call with Alan Edwards on the Brook Mine permit application and wanted to be able to put the CHIA in perspective.
> >
> > On Tue, Jul 5, 2016 at 9:23 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
> >
> > > Bj,
> > >
> > > To answer your first question, in past practice the CHIA has not been an explicit part of the public notice and comment process - it has followed a process similar to that of finishing the SDD where must be done prior to approval. When we finish the draft CHIA, it is sent to the WQD and SEO for a 30-day review to determine if they concur with the finding of no material damage to the hydrologic balance outside the mine permit boundary. This has been long-standing practice and originates from a 1996 "Statement of Material Damage" memo that was written by the DEQ and the SEO. Once we finalize the CHIA (obtain concurrence and signatures-see second paragraph below), it is placed upon the TFN shelf and at that point in theory could be subject to public review. However there is no separate notice or comment period issued once the final CHIA is completed; any public comment would have to occur within the timeframe of the final notice issued for the permit application. In my experience we have never had public comment on a CHIA that occurred within the public notice period.

On your second question, approval of the permit must wait until the final CHIA is issued. As I mentioned, to finalize the CHIA, it must receive concurrence by the WQD and the SEO. If the CHIA reviewers disagree with the overall findings and have major items of contention, we would have to initiate a discussion between the LQD and the permittee on making possible changes to the permit application. In my experience this has rarely happened; we are typically able to address any review comments within the CHIA itself. As the final step, the CHIA must be signed by the DEQ Director and the State Engineer before it is considered final. Our goal is to always have the final CHIA completed prior to the end of the public notice period so it is not holding up possible approval.

Hope this helps; if any other questions come up, please let me know.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 7:32 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I have a few questions about the CHIA process that I still am not clear about. One, is the CHIA subject to public notice and comment like a mine permit application? And if this is the case, can it be changed based on public comment or objection? Secondly, do any objections to the CHIA stop the permitting process, so that the permit must wait for the final CHIA?
>
> -bj
>
> --
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	BJ Kristiansen
Subject:	Re: CHIA questions
Date:	Tuesday, July 05, 2016 12:55:59 PM

Bj,

(1) The legal requirements for CHIAs are supported by statute in the Wyoming Environmental Quality Act, as well as LQD Coal Rules and Regulations. It is a state mandate in order to be in compliance with SMCRA.

Wyoming Environmental Quality Act

W.S. 35-11-406(n): "…No surface coal mining permit shall be approved unless the applicant affirmatively demonstrates and the administrator finds in writing": **(iii)** "The proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area;"

Land Quality Division Coal Rules and Regulations

Chapter 19, Section 2(a): In addition to other information required by the Act and these regulations, all surface coal mining permit applications shall contain:

(i) A determination of the projected result of proposed surface coal mining an reclamation operations, both on and off the mine site, which may reasonably be expected to change the quantity or quality of the surface and groundwater; the surface and groundwater flow, timing and availability, the surface and groundwater quality under seasonal flow conditions, including dissolved and suspended solids; the effect of acid-forming and toxic material on surface and groundwaters; the stream channel conditions; and the aquatic habitat in the permit area and other affected areas. This information shall be in sufficient detail to enable the Administrator to determine the probable cumulative hydrologic impacts on surface and groundwater systems including the impacts resulting from the proposed operation and their interaction with the impacts of all anticipated mining upon all affected hydrologic systems. Anticipated mining shall be projected over the life of the operation, and shall include all other existing coal mining operations, any proposed coal mining operation for which a permit application has been filed and all proposed operations required to meet diligent development requirements for leased federal coal where mine development and geological information is available. The assessment of the probable cumulative hydrologic impacts shall be sufficient to make the determination of W.S. § 35-11-406(n)(iii).

(2) The LQD has never formally announced to the public that a final CHIA has been completed. As such there is also no formal stand-alone comment period for the CHIA. However, I don't believe this necessarily means someone could not comment on the CHIA if the coal application itself (amendment, new permit, etc) was still in comment period. As I mentioned before, this has never happened, but this is one reason why we've made an attempt to finalize the CHIA prior to the end of the comment period.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 12:29 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> OK Matt, more questions...
>
> 1) What statutes, rules, or regulations dictate that the CHIA be performed? Is this a Federal or State mandate?
> 2) Is the CHIA supposed to be publically announced or, as you indicated, it has no public comment period?
>
> That's it for now.
>
> On Tue, Jul 5, 2016 at 9:36 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Ok sounds good...if any thing else comes up please let me know.
>>
>> Matt
>>
>> ---
>>
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055
>> matthew.kunze@wyo.gov
>>
>> On Tue, Jul 5, 2016 at 9:34 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>>
>>> Matt,

That is exactly what I needed. I appreciate your quick response since I have an 11:00 call with Alan Edwards on the Brook Mine permit application and wanted to be able to put the CHIA in perspective.

On Tue, Jul 5, 2016 at 9:23 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

Bj,

To answer your first question, in past practice the CHIA has not been an explicit part of the public notice and comment process - it has followed a process similar to that of finishing the SDD where must be done prior to approval. When we finish the draft CHIA, it is sent to the WQD and SEO for a 30-day review to determine if they concur with the finding of no material damage to the hydrologic balance outside the mine permit boundary. This has been long-standing practice and originates from a 1996 "Statement of Material Damage" memo that was written by the DEQ and the SEO. Once we finalize the CHIA (obtain concurrence and signatures-see second paragraph below), it is placed upon the TFN shelf and at that point in theory could be subject to public review. However there is no separate notice or comment period issued once the final CHIA is completed; any public comment would have to occur within the timeframe of the final notice issued for the permit application. In my experience we have never had public comment on a CHIA that occurred within the public notice period.

On your second question, approval of the permit must wait until the final CHIA is issued. As I mentioned, to finalize the CHIA, it must receive concurrence by the WQD and the SEO. If the CHIA reviewers disagree with the overall findings and have major items of contention, we would have to initiate a discussion between the LQD and the permittee on making possible changes to the permit application. In my experience this has rarely happened; we are typically able to address any review comments within the CHIA itself. As the final step, the CHIA must be signed by the DEQ Director and the State Engineer before it is considered final. Our goal is to always have the final CHIA completed prior to the end of the public notice period so it is not holding up possible approval.

Hope this helps; if any other questions come up, please let me know.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 7:32 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

Matt,

I have a few questions about the CHIA process that I still am not clear about. One, is the CHIA subject to public notice and comment like a mine permit application? And if this is the case, can it be changed based on public comment or objection? Secondly, do any objections to the CHIA stop the permitting process, so that the permit must wait for the final CHIA?

-bj

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: Re: CHIA questions
Date: Tuesday, July 05, 2016 2:18:17 PM

Thanks Matt.

On Tue, Jul 5, 2016 at 12:55 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Bj,
>
> (1) The legal requirements for CHIAs are supported by statute in the Wyoming Environmental Quality Act, as well as LQD Coal Rules and Regulations. It is a state mandate in order to be in compliance with SMCRA.
>
> ***Wyoming Environmental Quality Act***
>
> **W.S. 35-11-406(n)**: "…No surface coal mining permit shall be approved unless the applicant affirmatively demonstrates and the administrator finds in writing": **(iii)** "The proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area;"
>
> ***Land Quality Division Coal Rules and Regulations***
>
> **Chapter 19, Section 2(a):** In addition to other information required by the Act and these regulations, all surface coal mining permit applications shall contain:
>
> (i) A determination of the projected result of proposed surface coal mining an reclamation operations, both on and off the mine site, which may reasonably be expected to change the quantity or quality of the surface and groundwater; the surface and groundwater flow, timing and availability, the surface and groundwater quality under seasonal flow conditions, including dissolved and suspended solids; the effect of acid-forming and toxic material on surface and groundwaters; the stream channel conditions; and the aquatic habitat in the permit area and other affected areas. This information shall be in sufficient detail to enable the Administrator to determine the probable cumulative hydrologic impacts on surface and groundwater systems including the impacts resulting from the proposed operation and their interaction with the impacts of all anticipated mining upon all affected hydrologic systems. Anticipated mining shall be projected over the life of the operation, and shall include all other existing coal mining operations, any proposed coal mining operation for which a permit application has been filed and all

proposed operations required to meet diligent development requirements for leased federal coal where mine development and geological information is available. The assessment of the probable cumulative hydrologic impacts shall be sufficient to make the determination of W.S. § 35-11-406(n)(iii).

(2) The LQD has never formally announced to the public that a final CHIA has been completed. As such there is also no formal stand-alone comment period for the CHIA. However, I don't believe this necessarily means someone could not comment on the CHIA if the coal application itself (amendment, new permit, etc) was still in comment period. As I mentioned before, this has never happened, but this is one reason why we've made an attempt to finalize the CHIA prior to the end of the comment period.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 12:29 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> OK Matt, more questions...
>
> 1) What statutes, rules, or regulations dictate that the CHIA be performed? Is this a Federal or State mandate?
> 2) Is the CHIA supposed to be publically announced or, as you indicated, it has no public comment period?
>
> That's it for now.
>
> On Tue, Jul 5, 2016 at 9:36 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Ok sounds good...if any thing else comes up please let me know.
>>
>> Matt
>>
>>
>> ---
>>
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055
>> matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 9:34 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

Matt,

That is exactly what I needed. I appreciate your quick response since I have an 11:00 call with Alan Edwards on the Brook Mine permit application and wanted to be able to put the CHIA in perspective.

On Tue, Jul 5, 2016 at 9:23 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

Bj,

To answer your first question, in past practice the CHIA has not been an explicit part of the public notice and comment process - it has followed a process similar to that of finishing the SDD where must be done prior to approval. When we finish the draft CHIA, it is sent to the WQD and SEO for a 30-day review to determine if they concur with the finding of no material damage to the hydrologic balance outside the mine permit boundary. This has been long-standing practice and originates from a 1996 "Statement of Material Damage" memo that was written by the DEQ and the SEO. Once we finalize the CHIA (obtain concurrence and signatures-see second paragraph below), it is placed upon the TFN shelf and at that point in theory could be subject to public review. However there is no separate notice or comment period issued once the final CHIA is completed; any public comment would have to occur within the timeframe of the final notice issued for the permit application. In my experience we have never had public comment on a CHIA that occurred within the public notice period.

On your second question, approval of the permit must wait until the final CHIA is issued. As I mentioned, to finalize the CHIA, it must receive concurrence by the WQD and the SEO. If the CHIA reviewers disagree with the overall findings and have major items of contention, we would have to initiate a discussion between the LQD and the permittee on making possible changes to the permit application. In my experience this has rarely happened; we are typically able to address any review comments within the CHIA itself. As the final step, the CHIA must be signed by the DEQ Director and the State Engineer before it is considered final. Our goal is to always have the final CHIA completed prior to the end of the public notice period so it is not holding up possible approval.

Hope this helps; if any other questions come up, please let me know.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002

307-777-7055
matthew.kunze@wyo.gov

On Tue, Jul 5, 2016 at 7:32 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I have a few questions about the CHIA process that I still am not clear about. One, is the CHIA subject to public notice and comment like a mine permit application? And if this is the case, can it be changed based on public comment or objection? Secondly, do any objections to the CHIA stop the permitting process, so that the permit must wait for the final CHIA?
>
> -bj
>
> --
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Isaac Sutphin
To: Jim Ruby; Andrew Kuhlmann; Lynne Boomgaarden; hal@lonabaugh.com; mistee@lonabaugh.com
Subject: RE: Brook Mine LLC
Date: Tuesday, July 05, 2016 4:18:13 PM
Attachments: image001.gif

Mr. Ruby,

Brook Mine has no objection to holding the August hearing in Cheyenne.

Thanks,

IS

Isaac N. Sutphin, P.C.
Partner

CONFIDENTIALITY NOTICE: This message is confidential and may be privileged. If you believe that this email has been sent to you in error, please reply to the sender that you received the message in error; then please delete this e-mail. Thank you.

From: Jim Ruby [mailto:jim.ruby@wyo.gov]
Sent: Tuesday, July 05, 2016 9:59 AM
To: Andrew Kuhlmann; Lynne Boomgaarden; Isaac Sutphin; hal@lonabaugh.com; mistee@lonabaugh.com
Subject: Brook Mine LLC

Dear Counsel:

Do any of you have a preference on where the final hearing is held. Because of recent budget cutting action by the Governor and the Legislature the EQC must be mindful of our expenditures so Cheyenne is the best location for the Council to minimize costs related to staff travel. If you have an objection to holding the final hearing in Cheyenne and have a preferred location please let me know as soon as possible.

Have a great week.

Jim

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

HOLLAND&HART LLP

THE LAW OUT WEST

From: Mistee Elliott
To: Jim Ruby; Andrew Kuhlmann; Lynne Boomgaarden; insutphin@hollandhart.com; Hal Corbett
Subject: RE: Brook Mine LLC
Date: Wednesday, July 06, 2016 10:14:52 AM
Attachments: ~WRD000.jpg

Mr. Ruby,

Padlock prefers Casper or Sheridan, as these locations would greatly cut down on Padlock's expenses. However, Padlock will not formally object to the hearing being held in Cheyenne, as that location appears to be preferred by the other parties and the EQC.

Mistee L. Elliott
Lonabaugh and Riggs, LLP
P.O. Drawer 5059
Sheridan, WY 82801
(307) 672-7444
(307) 672-2230 fax

From: Jim Ruby [mailto:jim.ruby@wyo.gov]
Sent: Tuesday, July 05, 2016 9:59 AM
To: Andrew Kuhlmann; Lynne Boomgaarden; insutphin@hollandhart.com; Hal Corbett; Mistee Elliott
Subject: Brook Mine LLC

Dear Counsel:

Do any of you have a preference on where the final hearing is held. Because of recent budget cutting action by the Governor and the Legislature the EQC must be mindful of our expenditures so Cheyenne is the best location for the Council to minimize costs related to staff travel. If you have an objection to holding the final hearing in Cheyenne and have a preferred location please let me know as soon as possible.

Have a great week.

Jim

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: Kim Pandullo
Subject: Re: ready for cc"s when you are.
Date: Tuesday, July 12, 2016 8:22:57 AM

Kim,

Below is the language for the cc:'s at the end of the letter:

Brook Mining Company, c/o Isaac Sutphin, Holland & Hart LLP (via electronic filing)
Big Horn Coal Company, c/o Lynne Boomgaarden, Crowley Fleck PLLP (via electronic filing)
Padlock Ranch Company, c/o Mistee Elliott and Hal Corbett, Lonabaugh and Riggs, LLP (via electronic filing)

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Andrew Kuhlmann
To:	Isaac Sutphin; Lynne Boomgaarden; Hal Corbett; Mistee Elliott
Subject:	DEQ Director"s Advice - Brook Mine, EQC Docket 16-1601
Date:	Tuesday, July 12, 2016 5:17:39 PM
Attachments:	2016-7-12 DEQ Director ltr to EQC, Dkt 16-1601.pdf

---

Counsel,

Attached is the letter Director Parfitt submitted to the EQC today in response to their request for his advice under Wyoming Statute 35-11-109(a)(x). The EQC has not yet posted this letter to the online docket.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

DEQ

Matthew H. Mead, Governor

Todd Parfitt, Director

July 11, 2016

FILED

JUL 12 2016

Jim Ruby, Executive Secretary
Environmental Quality Council

Chairman David Bagley
Hearing Officer Aaron Clark
Wyoming Environmental Quality Council
112 W 25th Street
Herschler Bldg. 1W, Room 1714
Cheyenne, WY 82002

Re: June 20, 2016 Request for Advice Pursuant to Wyoming Statute § 35-11-109(a)(x)

Dear Chairman Bagley, Hearing Officer Clark, and Council Members,

This letter is in response to your letter, dated June 20, 2016, requesting my advice on five specific questions regarding the current permit application submitted by Brook Mining Company, LLC, and your pending proceedings on a request for an order in lieu of landowner consent, EQC Docket No. 16-1601. My advice regarding those questions is as follows:

1. What is the status of DEQ's Brook Mine permit review and what steps need to occur to finalize DEQ approval?

Brook Mining Company, LLC, (Brook Mining) submitted its application to the Department's Land Quality Division (LQD) on October 30, 2014. LQD deemed the application complete on November 4, 2014. Since that time, LQD has performed five rounds of technical review. As a result of those rounds of review, there is only one remaining deficiency regarding the application's technical adequacy: the lack of surface owner consent to the mine and reclamation plans as required by Wyoming Statute § 35-11-406(b)(xi) and (xii).

The next step in the application review process is for Brook Mining to either provide LQD with proof of landowner consent sufficient to correct the deficiency or an order issued by the Council in lieu of landowner consent. The LQD Administrator could then evaluate that submission and make a decision on whether the application, as a whole, is technically adequate. If the Administrator determines that the application is technically adequate, the application will then proceed to public notice under Wyoming Statute § 35-11-406(j), followed by public comment under Wyoming Statute § 35-11-406(k). The public comment period includes the opportunity for interested persons to ask for a contested hearing before the Council or an informal conference before the Director regarding the persons' objections to the application. Those proceedings can affect whether a permit is issued or denied, and either proceeding would affect the timing of a final decision on permit issuance.

Final approval of the surface coal mining application also requires completion of steps that are in addition to, but separate from, the technical adequacy review and the procedures under Wyoming Statute § 35-11-406. These include LQD's approval of a cumulative hydrologic impact assessment (CHIA) for the mine, and the operator passing a review of the federal Office of Surface Mining Reclamation and Enforcement's (OSMRE) applicant violator system (AVS). Both of these steps are required for OSMRE concurrence with the Department's approval of a surface coal mining permit. The operator must also post required bonds prior to final permit issuance.

2. Are there any parts of the mine plan which DEQ has determined to be incomplete or inadequate?

The LQD has no outstanding review comments for Brook Mining to address related to the proposed mine and reclamation plans.

3. Is consent from the landowners the only deficiency DEQ has identified with the current reclamation plan or have other parts/requirements been determined to be incomplete or inadequate?

Currently, surface owner consent to the mine and reclamation plans is the only deficiency with the mine and reclamation plans that Brook Mining must satisfy before LQD can complete its review of the application for technical adequacy.

4. Can future public comments received by DEQ result in material changes to either the current mine plan or the current reclamation plan?

Public comments or objections may affect my final decision on a permit application or what conditions the Department places on an issued permit. Those things could possibly include changes to the mine or reclamation plans.

5. When will DEQ determine the reclamation bond and surface owner protection bond requirements for this application and when is the applicant required to submit the bonds?

Following the public comment period and any informal conference or Council hearing under Wyoming Statute § 35-11-406(k), the LQD Administrator will know whether the permit application may move forward and what its final scope and content will be. Following those processes, the LQD Administrator will set the required amount of reclamation bonding under Wyoming Statute § 35-11-417(c)(i) and bonding for surface damage under Wyoming Statute § 35-11-416(a). Both bonds must be posted to the LQD prior to issuance of the permit. However, under Wyoming Statute § 35-11-416(a), the LQD Administrator will not require a bond for surface damage when an "agreement negotiated between the surface owner and the mineral owner or developer waives any requirement" for the bond. If such an agreement exists in this case, there will not be a surface owner protection bond for this permit.

Sincerely,

Todd Parfitt
Director

cc: Brook Mining Company, c/o Isaac Sutphin, Holland & Hart LLP (via electronic filing)
Big Horn Coal Company, c/o Lynne Boomgaarden, Crowley Fleck PLLP (via electronic filing)
Padlock Ranch Company, c/o Mistee Elliott and Hal Corbett, Lonabaugh and Riggs, LLP (via electronic filing)

From: EQC WEB
To: andrew.kuhlmann@wyo.gov; EQC WEB
Subject: Invitation: Final Hearing @ Wed Aug 17, 2016 9am - 5pm (Andrew Kuhlmann)
Date: Monday, July 25, 2016 9:09:05 AM
Attachments: invite.ics

Final Hearing

more details »

16-1601 In Re Brook Mine Application Permit Holders Appeal
http://eqc.wyo.gov/Secure/DocketFiles.aspx?DocketId=3227

When	Wed Aug 17, 2016 9am – 5pm Mountain Time
Where	Game and Fish Department, 5400 Bishop Boulevard, Room 171, the Elk Room, Cheyenne WY (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/final-hearing
Calendar	Andrew Kuhlmann
Who	(Guest list has been hidden at organizer's request)

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_123.ics (1106 Bytes) cannot be converted to PDF format.

From:	Andrew Kuhlmann
To:	Todd Parfitt; Alan Edwards; Mark Rogaczewski; BJ Kristiansen
Subject:	Change in Brook Mining hearing dates
Date:	Tuesday, July 26, 2016 3:30:41 PM
Attachments:	2016-7-25 EQC Amended Notice of Hearing.pdf

Privileged & Confidential
Attorney-Client Communication

All,

The EQC issued the attached amended order giving notice of Brook Mining's upcoming hearing. The location of the hearing is still in Cheyenne at Game & Fish's offices. But the Council moved the dates of the hearing back a day to the 17th and 18th. I have no idea why they changed the dates, but let me know if you have any conflicts with the new dates so we can plan ahead.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

Filed: 7/25/2016 9:09:31 AM WEQC

BEFORE THE ENVIRONMENTAL QUALITY COUNCIL
STATE OF WYOMING

IN RE BROOK MINE APPLICATION	)	
	)	**DOCKET 16-1601**
	)	

NOTICE OF HEARING

TAKE NOTICE: The final hearing in the above entitled matter, has been changed, it will be held starting at 9:00 a.m. August 17 and 18, 2016 in room 171, the Elk Room, of the Game and Fish Department, 5400 Bishop Boulevard Cheyenne WY 82006.

So Ordered this 25th day of July, 2016.

Aaron Clark, Hearing Examiner
Environmental Quality Council

CERTIFICATE OF SERVICE

I, James Ruby, certify that at Cheyenne, Wyoming, on the 25th day of July, 2016, I served a copy of the foregoing **Notice of Hearing** by electronic mail to the following:

Isaac Sutphin
Holland and Hart
2515 Warren Avenue
Suite 450
Cheyenne WY 82001
INSutphin@hollandhart.com

Haultain Corbett
50 East loucks Street
Suite 110
P.O. Drawer 5059
Sheridan WY 82801-5059
hal@lonabaugh.com

Lynnette Boomgaarden
Crowley Fleck, PLLP
237 Storey Blvd. Suite 110
Cheyenne WY 82009
lboomgaarden@crowleyfleck.com

James Ruby
Environmental Quality Council
122 W. 25th, Rm. 1714
Herschler Bldg.
Cheyenne, WY 82002
Phone: 307-777-7170
FAX: 307-777-6134

From:	Andrew Kuhlmann
To:	Ryan Schelhaas
Subject:	EQC"s hearing on Brook Mine order in lieu of consent
Date:	Thursday, August 04, 2016 11:22:55 AM
Attachments:	EQC"s Amended notice of hearing.pdf

Ryan,

Mike mentioned to me that you wanted to confirm the dates for the upcoming Brook Mine hearing. The dates are now August 17 and 18.

I have attached an order the Council sent out last week that moved the hearing from its original dates back a day to the 17th and 18th. I'm not sure why they changed the schedule or if they consulted the parties first. DEQ is not a party to this hearing, but we will still be attending it.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

Filed: 7/25/2016 9:09:31 AM WEQC

BEFORE THE ENVIRONMENTAL QUALITY COUNCIL
STATE OF WYOMING

IN RE BROOK MINE APPLICATION	)	
	)	**DOCKET 16-1601**
	)	

NOTICE OF HEARING

TAKE NOTICE: The final hearing in the above entitled matter, has been changed, it will be held starting at 9:00 a.m. August 17 and 18, 2016 in room 171, the Elk Room, of the Game and Fish Department, 5400 Bishop Boulevard Cheyenne WY 82006.

So Ordered this 25th day of July, 2016.

Aaron Clark, Hearing Examiner
Environmental Quality Council

CERTIFICATE OF SERVICE

I, James Ruby, certify that at Cheyenne, Wyoming, on the 25th day of July, 2016, I served a copy of the foregoing **Notice of Hearing** by electronic mail to the following:

Isaac Sutphin
Holland and Hart
2515 Warren Avenue
Suite 450
Cheyenne WY 82001
INSutphin@hollandhart.com

Haultain Corbett
50 East loucks Street
Suite 110
P.O. Drawer 5059
Sheridan WY 82801-5059
hal@lonabaugh.com

Lynnette Boomgaarden
Crowley Fleck, PLLP
237 Storey Blvd. Suite 110
Cheyenne WY 82009
lboomgaarden@crowleyfleck.com

James Ruby
Environmental Quality Council
122 W. 25th, Rm. 1714
Herschler Bldg.
Cheyenne, WY 82002
Phone: 307-777-7170
FAX: 307-777-6134

From: Ryan Schelhaas
To: Andrew Kuhlmann
Subject: Re: EQC"s hearing on Brook Mine order in lieu of consent
Date: Thursday, August 04, 2016 4:14:04 PM

Thanks Andrew.

On Thu, Aug 4, 2016 at 11:22 AM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Ryan,
>
> Mike mentioned to me that you wanted to confirm the dates for the upcoming Brook Mine hearing. The dates are now August 17 and 18.
>
> I have attached an order the Council sent out last week that moved the hearing from its original dates back a day to the 17th and 18th. I'm not sure why they changed the schedule or if they consulted the parties first. DEQ is not a party to this hearing, but we will still be attending it.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Ryan Schelhaas
Deputy Attorney General
Civil Division
Wyoming Attorney General's Office
Kendrick Building

2320 Capitol Ave.
Cheyenne, WY 82002
(307) 777-5786, (307) 777-3687 FAX

The information provided in this communication is confidential and protected, may be attorney client privileged, and is intended only for the use of the addressee. Unauthorized use, disclosure, or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify me immediately at (307)777-5786.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Alan Edwards
To: andrew.kuhlmann@wyo.gov
Subject: Out-of-office Re: Brook Mining hearing
Date: Tuesday, August 09, 2016 5:53:04 PM

I will be out of the office on travel returning Wednesday afternoon August 10. I will occassionally be checking e-mail.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

From: Alan Edwards
To: andrew.kuhlmann@wyo.gov
Subject: Out-of-office Re: Brook Mining hearing
Date: Tuesday, August 09, 2016 5:53:05 PM

I will be out of the office on travel returning Wednesday afternoon August 10. I will occassionally be checking e-mail.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: todd.parfitt@wyo.gov; Mark Rogaczewski; BJ Kristiansen; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Discussion on Brook Mine @ Thu Aug 11, 2016 9:30am - 10:30am (todd.parfitt@wyo.gov)
Date: Wednesday, August 10, 2016 5:34:53 PM
Attachments: invite.ics

Discussion on Brook Mine

more details »

I will be out of the office Thursday afternoon and Friday, so it would be good for at least some of us to talk tomorrow morning if possible, if possible.

When	Thu Aug 11, 2016 9:30am – 10:30am Mountain Time
Where	Andrew will call and conference in everyone who can attend (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	todd.parfitt@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • Mark Rogaczewski • BJ Kristiansen • Todd Parfitt • alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account todd.parfitt@wyo.gov because you are subscribed for invitations on calendar todd.parfitt@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_124.ics (1738 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; Mark Rogaczewski; Todd Parfitt; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Discussion on Brook Mine @ Thu Aug 11, 2016 9:30am - 10:30am (bjarne.kristiansen@wyo.gov)
Date: Wednesday, August 10, 2016 5:34:53 PM
Attachments: invite.ics

Discussion on Brook Mine

more details »

I will be out of the office Thursday afternoon and Friday, so it would be good for at least some of us to talk tomorrow morning if possible, if possible.

When Thu Aug 11, 2016 9:30am – 10:30am Mountain Time

Where Andrew will call and conference in everyone who can attend (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar bjarne.kristiansen@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- Mark Rogaczewski
- Todd Parfitt
- BJ Kristiansen
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_125.ics (1741 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; BJ Kristiansen; Todd Parfitt; Mark Rogaczewski; Andrew Kuhlmann
Subject: Invitation: Discussion on Brook Mine @ Thu Aug 11, 2016 9:30am - 10:30am (alan.edwards@wyo.gov)
Date: Wednesday, August 10, 2016 5:34:53 PM
Attachments: invite.ics

Discussion on Brook Mine

more details »

I will be out of the office Thursday afternoon and Friday, so it would be good for at least some of us to talk tomorrow morning if possible, if possible.

When	Thu Aug 11, 2016 9:30am – 10:30am Mountain Time
Where	Andrew will call and conference in everyone who can attend (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	alan.edwards@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • BJ Kristiansen • Todd Parfitt • Mark Rogaczewski • alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_126.ics (1738 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; BJ Kristiansen; Todd Parfitt; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Discussion on Brook Mine @ Thu Aug 11, 2016 9:30am - 10:30am (mark.rogaczewski@wyo.gov)
Date: Wednesday, August 10, 2016 5:34:53 PM
Attachments: invite.ics

Discussion on Brook Mine

more details »

I will be out of the office Thursday afternoon and Friday, so it would be good for at least some of us to talk tomorrow morning if possible, if possible.

When Thu Aug 11, 2016 9:30am – 10:30am Mountain Time

Where Andrew will call and conference in everyone who can attend (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar mark.rogaczewski@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- BJ Kristiansen
- Mark Rogaczewski
- Todd Parfitt
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_127.ics (1743 Bytes) cannot be converted to PDF format.

From:	Andrew Kuhlmann
To:	Alan Edwards
Cc:	Todd Parfitt; Mark Rogaczewski; BJ Kristiansen
Subject:	Re: Brook Mining hearing
Date:	Thursday, August 11, 2016 8:21:18 AM

Alan,

Certainly. Would 11 o'clock work better? It looks like BJ and I are available then.

Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Andrew Kuhlmann
Cc:	Todd Parfitt; Mark Rogaczewski; BJ Kristiansen
Subject:	Re: Brook Mining hearing
Date:	Thursday, August 11, 2016 8:34:00 AM

That will work. Thanks.

Sent from my iPhone

On Aug 11, 2016, at 8:20 AM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Alan,
>
> Certainly. Would 11 o'clock work better? It looks like BJ and I are available then.
>
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue ***Please note the new mailing address**
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; alan.edwards@wyo.gov; BJ Kristiansen; Todd Parfitt; Andrew Kuhlmann
Subject: Updated Invitation: Discussion on Brook Mine @ Thu Aug 11, 2016 11am - 12pm (mark.rogaczewski@wyo.gov)
Date: Thursday, August 11, 2016 10:14:11 AM
Attachments: invite.ics

This event has been changed.

Discussion on Brook Mine

more details »

I will be out of the office Thursday afternoon and Friday, so it would be good for at least some of us to talk tomorrow morning if possible, if possible.

When	**Changed:** Thu Aug 11, 2016 11am – 12pm Mountain Time
Where	Andrew will call and conference in everyone who can attend (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	mark.rogaczewski@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • alan.edwards@wyo.gov • BJ Kristiansen • Mark Rogaczewski • Todd Parfitt

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for updated invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_128.ics (1856 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: todd.parfitt@wyo.gov; BJ Kristiansen; Mark Rogaczewski; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Updated Invitation: Discussion on Brook Mine @ Thu Aug 11, 2016 11am - 12pm (todd.parfitt@wyo.gov)
Date: Thursday, August 11, 2016 10:14:11 AM
Attachments: invite.ics

This event has been changed.

Discussion on Brook Mine

more details »

I will be out of the office Thursday afternoon and Friday, so it would be good for at least some of us to talk tomorrow morning if possible, if possible.

When **Changed:** Thu Aug 11, 2016 11am – 12pm Mountain Time

Where Andrew will call and conference in everyone who can attend (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar todd.parfitt@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- BJ Kristiansen
- Todd Parfitt
- Mark Rogaczewski
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account todd.parfitt@wyo.gov because you are subscribed for updated invitations on calendar todd.parfitt@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_129.ics (1837 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; Todd Parfitt; Mark Rogaczewski; BJ Kristiansen; Andrew Kuhlmann
Subject: Updated Invitation: Discussion on Brook Mine @ Thu Aug 11, 2016 11am - 12pm (alan.edwards@wyo.gov)
Date: Thursday, August 11, 2016 10:14:11 AM
Attachments: invite.ics

This event has been changed.

Discussion on Brook Mine

more details »

I will be out of the office Thursday afternoon and Friday, so it would be good for at least some of us to talk tomorrow morning if possible, if possible.

When **Changed:** Thu Aug 11, 2016 11am – 12pm Mountain Time

Where Andrew will call and conference in everyone who can attend (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar alan.edwards@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- Todd Parfitt
- Mark Rogaczewski
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for updated invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_130.ics (1837 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; Todd Parfitt; alan.edwards@wyo.gov; Mark Rogaczewski; Andrew Kuhlmann
Subject: Updated Invitation: Discussion on Brook Mine @ Thu Aug 11, 2016 11am - 12pm (bjarne.kristiansen@wyo.gov)
Date: Thursday, August 11, 2016 10:14:11 AM
Attachments: invite.ics

This event has been changed.

Discussion on Brook Mine

more details »

I will be out of the office Thursday afternoon and Friday, so it would be good for at least some of us to talk tomorrow morning if possible, if possible.

When	**Changed:** Thu Aug 11, 2016 11am – 12pm Mountain Time
Where	Andrew will call and conference in everyone who can attend (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	bjarne.kristiansen@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • Todd Parfitt • BJ Kristiansen • alan.edwards@wyo.gov • Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for updated invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_131.ics (1925 Bytes) cannot be converted to PDF format.

From:	BJ Kristiansen
To:	Alan Edwards; Andrew Kuhlmann; Mark Rogaczewski
Subject:	Round 5 LQD response - Attorney Client Privilege
Date:	Thursday, August 11, 2016 11:47:02 AM
Attachments:	a round 5a cover.pdf round 5 comments.pdf

Gentlemen,

Here is the Round 5 Response to the Brook Mine permit application.

-bj

--

Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

March 3, 2016

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Round 5 Technical Review, Brook Mine Coal Mine Permit Application, Adjudication Volume, TFN 6 2/025

Dear : Mr. Atkins

The Land Quality Division received your Round 4 Adjudication comment responses from Holland and Hart on February 3, 2016. The statutory requirement for LQD to respond to the second round responses is 30 days from date of receipt, which is March 4, 2016. The responses from your attorneys have been reviewed in their entirety and comments, questions, noteworthy deficiencies, and requests for additional information were generated for Round 5. These have been gathered by the permit coordinator and are presented as an attachment to this letter.

Please review the Fifth Round Adjudication comments and prepare your replies accordingly. Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round 5 materials. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ-LQD District III

Cc: Cheyenne LQD files w/attachment

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

March 3, 2016

Land Quality Division Round 5 Comments
Brook Mine Permit Application, TFN 6 2/025
Adjudication Section, Surface Owner Consent and Approval

The Department of Environmental Quality, Land Quality Division ("Division") provides the following comments after examining the Applicant's responses to the Division's fourth round of comments on the adjudication section of the Brook Mine Permit Application, TFN 6 2/025. These comments relate to the permit application requirements under Wyoming Statutes § 35-11-406(b)(xi) and (xii) for certain written consents from the surface landowners whose lands are located inside the proposed mine permit boundary.

In its responses, the Applicant provided additional documents that it believes support a conclusion that the Division should deem the application technically adequate and suitable for publication. The Applicant described its position that the landowner consent requirements in Wyoming Statute § 35-11-406(b)(xi) and (xii) do not apply to lands conveyed in the 1954 Deed between Sheridan-Wyoming Coal Company and the Big Horn Coal Company. The Applicant also provided excerpts from files for existing mine permits that the Applicant believes support the Department deeming this application technically adequate.

After examining the response materials, the Division has determined that the permit application is still deficient at this time.

Despite the Applicant's arguments regarding the 1954 Deed, the landowner consent requirements under Wyoming Statute § 35-11-406(b)(xi) and (xii) continue to apply to lands within the proposed permit boundary. For the surface landowners and lands affected by it, the 1954 Deed appears to grant the Applicant the right to enter and commence operations on so much of the surface as may be necessary or convenient for the purposes identified in the deed. This likely would satisfy that particular requirement under Wyoming Statute § 35-11-406(b)(xi) to the extent that the Applicant's access and occupation of particular lands is necessary or convenient in accordance with the deed. However, even in light of the additional documents and legal arguments provided by the Applicant, the 1954 Deed does not constitute an instrument of consent from the surface landowners to the mining and reclamation plans, as required by both subsections(b)(xi) and (xii). While the 1954 Deed appears to grant the Applicant some rights to use the surface of lands under the deed, it does not grant unfettered permission regarding how the Applicant may use those lands.

Based on these determinations, the Division finds that the adjudication section of the permit application does not contain all necessary surface landowner consents and is therefore deficient. The Applicant must obtain written approval of the mine and reclamation plans from the surface landowners within the proposed permit boundary, or obtain appropriate orders in lieu of consent in accordance with Wyoming Statute § 35-11-406(b)(xii), before the Division may declare the application technically complete and suitable for publication.

From: Alan Edwards
To: todd.parfitt@wyo.gov; andrew.kuhlmann@wyo.gov; Connie Osborne; BJ Kristiansen; Alan Edwards
Subject: Invitation: Brook Mine Pre-meeting @ Tue Aug 16, 2016 2pm - 5pm (todd.parfitt@wyo.gov)
Date: Friday, August 12, 2016 10:58:43 AM
Attachments: invite.ics

Brook Mine Pre-meeting

more details »

Todd - You are included in case you want to sit in on portion.
Connie - Would you schedule to conference room

When Tue Aug 16, 2016 2pm – 5pm Mountain Time

Where Director's Conference Room (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/alan-edwards

Calendar todd.parfitt@wyo.gov

Who
- alan.edwards@wyo.gov - organizer
- andrew.kuhlmann@wyo.gov
- Connie Osborne
- BJ Kristiansen
- Todd Parfitt

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account todd.parfitt@wyo.gov because you are subscribed for invitations on calendar todd.parfitt@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_132.ics (1645 Bytes) cannot be converted to PDF format.

From: Alan Edwards
To: connie.osborne@wyo.gov; BJ Kristiansen; Todd Parfitt; andrew.kuhlmann@wyo.gov; Alan Edwards
Subject: Invitation: Brook Mine Pre-meeting @ Tue Aug 16, 2016 2pm - 5pm (connie.osborne@wyo.gov)
Date: Friday, August 12, 2016 10:58:43 AM
Attachments: invite.ics

Brook Mine Pre-meeting

more details »

Todd - You are included in case you want to sit in on portion.
Connie - Would you schedule to conference room

When Tue Aug 16, 2016 2pm – 5pm Mountain Time

Where Director's Conference Room (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/alan-edwards

Calendar connie.osborne@wyo.gov

Who
- alan.edwards@wyo.gov - organizer
- BJ Kristiansen
- Todd Parfitt
- Connie Osborne
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account connie.osborne@wyo.gov because you are subscribed for invitations on calendar connie.osborne@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_133.ics (1651 Bytes) cannot be converted to PDF format.

From: Alan Edwards
To: bj.kristiansen@wyo.gov; Todd Parfitt; Connie Osborne; andrew.kuhlmann@wyo.gov; Alan Edwards
Subject: Invitation: Brook Mine Pre-meeting @ Tue Aug 16, 2016 2pm - 5pm (bjarne.kristiansen@wyo.gov)
Date: Friday, August 12, 2016 10:58:44 AM
Attachments: invite.ics

Brook Mine Pre-meeting

more details »

Todd - You are included in case you want to sit in on portion.
Connie - Would you schedule to conference room

When	Tue Aug 16, 2016 2pm – 5pm Mountain Time
Where	Director's Conference Room (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/alan-edwards
Calendar	bjarne.kristiansen@wyo.gov
Who	• alan.edwards@wyo.gov - organizer • Todd Parfitt • BJ Kristiansen • Connie Osborne • andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_134.ics (1651 Bytes) cannot be converted to PDF format.

From: Alan Edwards
To: andrew.kuhlmann@wyo.gov; BJ Kristiansen; Connie Osborne; Todd Parfitt; Alan Edwards
Subject: Invitation: Brook Mine Pre-meeting @ Tue Aug 16, 2016 2pm - 5pm (Andrew Kuhlmann)
Date: Friday, August 12, 2016 10:58:45 AM
Attachments: invite.ics

Brook Mine Pre-meeting

more details »

Todd - You are included in case you want to sit in on portion.
Connie - Would you schedule to conference room

When	Tue Aug 16, 2016 2pm – 5pm Mountain Time
Where	Director's Conference Room (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/alan-edwards
Calendar	Andrew Kuhlmann
Who	• alan.edwards@wyo.gov - organizer • andrew.kuhlmann@wyo.gov • BJ Kristiansen • Connie Osborne • Todd Parfitt

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_135.ics (1652 Bytes) cannot be converted to PDF format.

From: Google Calendar
To: Matthew Kunze; Matthew Kunze
Subject: Notification: Brook Mine EQC Hearing @ Wed Aug 17, 2016 8:45am - 4:30pm (matthew.kunze@wyo.gov)
Date: Wednesday, August 17, 2016 8:29:46 AM

Brook Mine EQC Hearing

more details »

When	Wed Aug 17, 2016 8:45am – 4:30pm Mountain Time
Where	Elk Room, Game and Fish Commission, 5400 Bishop Boulevard (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/matthew-kunze
Calendar	matthew.kunze@wyo.gov
Who	• Matthew Kunze - organizer

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for notifications on calendar matthew.kunze@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Kimber Wichmann
Cc:	Alan Edwards; Mark Rogaczewski; Kyle Wendtland; Andrew Kuhlmann
Subject:	Brook Mine/Ramaco letter of available capital for bonding.
Date:	Monday, August 22, 2016 9:14:05 AM

Kimber,

Alan left a voicemail for me on Friday regarding the Ramaco bonding scenario. He wants to make sure that we stay on top of this so we are ready to act when we receive a bonding instrument. The only thing we have at present is the letter from the insurance company that I forwarded to you on the 11th. I have not had any verbal indication from Ramaco that they have a specific format for their bonding instrument yet. I will contact you as soon as I have any further indications of a bonding instrument and amount.

-bj

--

Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; Mark Rogaczewski; BJ Kristiansen; Andrew Kuhlmann
Subject: Invitation: Brook Mining responses @ Thu Sep 8, 2016 8am - 9am (alan.edwards@wyo.gov)
Date: Thursday, September 01, 2016 9:52:02 AM
Attachments: invite.ics

Brook Mining responses

more details »

When Thu Sep 8, 2016 8am – 9am Mountain Time

Where By phone - Andrew will call and conference in everyone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar alan.edwards@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- Mark Rogaczewski
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_136.ics (1426 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; BJ Kristiansen; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Brook Mining responses @ Thu Sep 8, 2016 8am - 9am (mark.rogaczewski@wyo.gov)
Date: Thursday, September 01, 2016 9:52:02 AM
Attachments: invite.ics

Brook Mining responses

more details »

When Thu Sep 8, 2016 8am – 9am Mountain Time

Where By phone - Andrew will call and conference in everyone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar mark.rogaczewski@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- BJ Kristiansen
- alan.edwards@wyo.gov
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_137.ics (1431 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; Mark Rogaczewski; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Brook Mining responses @ Thu Sep 8, 2016 8am - 9am (bjarne.kristiansen@wyo.gov)
Date: Thursday, September 01, 2016 9:52:02 AM
Attachments: invite.ics

Brook Mining responses

more details »

When Thu Sep 8, 2016 8am – 9am Mountain Time

Where By phone - Andrew will call and conference in everyone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar bjarne.kristiansen@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- Mark Rogaczewski
- BJ Kristiansen
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_138.ics (1429 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; Andrew Kuhlmann
Subject: Canceled Event: Brook Mining responses @ Thu Sep 8, 2016 8am - 9am (mark.rogaczewski@wyo.gov)
Date: Wednesday, September 07, 2016 6:05:37 PM
Attachments: invite.ics

This event has been canceled and removed from your calendar.

Brook Mining responses

When Thu Sep 8, 2016 8am – 9am Mountain Time

Where By phone - Andrew will call and conference in everyone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar mark.rogaczewski@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- Mark Rogaczewski
- BJ Kristiansen
- alan.edwards@wyo.gov

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for cancellations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_139.ics (1135 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Canceled Event: Brook Mining responses @ Thu Sep 8, 2016 8am - 9am (alan.edwards@wyo.gov)
Date: Wednesday, September 07, 2016 6:05:38 PM
Attachments: invite.ics

This event has been canceled and removed from your calendar.

Brook Mining responses

When Thu Sep 8, 2016 8am – 9am Mountain Time

Where By phone - Andrew will call and conference in everyone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar alan.edwards@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- BJ Kristiansen
- Mark Rogaczewski

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for cancellations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_140.ics (1121 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; Andrew Kuhlmann
Subject: Canceled Event: Brook Mining responses @ Thu Sep 8, 2016 8am - 9am (bjarne.kristiansen@wyo.gov)
Date: Wednesday, September 07, 2016 6:05:38 PM
Attachments: invite.ics

This event has been canceled and removed from your calendar.

Brook Mining responses

When Thu Sep 8, 2016 8am – 9am Mountain Time

Where By phone - Andrew will call and conference in everyone (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar bjarne.kristiansen@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- Mark Rogaczewski
- alan.edwards@wyo.gov
- BJ Kristiansen

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for cancellations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_141.ics (1121 Bytes) cannot be converted to PDF format.

From:	Andrew Kuhlmann
To:	Mark Rogaczewski; BJ Kristiansen
Cc:	Alan Edwards
Subject:	Change to meeting on Brook Mine
Date:	Wednesday, September 07, 2016 6:11:55 PM

Mark and BJ,

I apologize for the late notice, but I had to cancel our meeting tomorrow morning on Brook. Something came up at the end of the day that caused Alan to ask me to reschedule the meeting to Friday. I just now got back to my office to send you this email.

I don't currently see a time on our Google calendars that would work for all four of us on Friday morning, so I will be in touch with you tomorrow (Thursday) to see if we can find one that will work. Once again, I apologize for the late cancellation.

Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: BJ Kristiansen
To: andrew kuhlmann
Subject: Re: Change to meeting on Brook Mine
Date: Wednesday, September 07, 2016 6:14:11 PM

Thanks for notifying us Andrew.

On Sep 7, 2016 6:11 PM, "Andrew Kuhlmann" <andrew.kuhlmann@wyo.gov> wrote:

> Mark and BJ,
>
> I apologize for the late notice, but I had to cancel our meeting tomorrow morning on Brook. Something came up at the end of the day that caused Alan to ask me to reschedule the meeting to Friday. I just now got back to my office to send you this email.
>
> I don't currently see a time on our Google calendars that would work for all four of us on Friday morning, so I will be in touch with you tomorrow (Thursday) to see if we can find one that will work. Once again, I apologize for the late cancellation.
>
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Andrew Kuhlmann
Cc: BJ Kristiansen; Alan Edwards
Subject: Re: Change to meeting on Brook Mine
Date: Thursday, September 08, 2016 6:49:15 AM

Andrew,

Thanks for the update. My Google calendar is up to date so please feel free to review for a time that meets everyone's schedule.

Mark

On Wed, Sep 7, 2016 at 6:11 PM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Mark and BJ,
>
> I apologize for the late notice, but I had to cancel our meeting tomorrow morning on Brook. Something came up at the end of the day that caused Alan to ask me to reschedule the meeting to Friday. I just now got back to my office to send you this email.
>
> I don't currently see a time on our Google calendars that would work for all four of us on Friday morning, so I will be in touch with you tomorrow (Thursday) to see if we can find one that will work. Once again, I apologize for the late cancellation.
>
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski; Andrew Kuhlmann
Subject: Invitation: Brook Mine discussion @ Fri Sep 9, 2016 2pm - 3pm (bjarne.kristiansen@wyo.gov)
Date: Thursday, September 08, 2016 3:32:21 PM
Attachments: invite.ics

Brook Mine discussion

more details »

Please let me know if this time won't work.

When	Fri Sep 9, 2016 2pm – 3pm Mountain Time
Where	By phone (Andrew will conference everyone in) (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	bjarne.kristiansen@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • BJ Kristiansen • alan.edwards@wyo.gov • Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_142.ics (1468 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; BJ Kristiansen; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Brook Mine discussion @ Fri Sep 9, 2016 2pm - 3pm (mark.rogaczewski@wyo.gov)
Date: Thursday, September 08, 2016 3:32:21 PM
Attachments: invite.ics

Brook Mine discussion

more details »

Please let me know if this time won't work.

When Fri Sep 9, 2016 2pm – 3pm Mountain Time

Where By phone (Andrew will conference everyone in) (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann

Calendar mark.rogaczewski@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- BJ Kristiansen
- Mark Rogaczewski
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_143.ics (1470 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; Mark Rogaczewski; BJ Kristiansen; Andrew Kuhlmann
Subject: Invitation: Brook Mine discussion @ Fri Sep 9, 2016 2pm - 3pm (alan.edwards@wyo.gov)
Date: Thursday, September 08, 2016 3:32:22 PM
Attachments: invite.ics

Brook Mine discussion

more details »

Please let me know if this time won't work.

When	Fri Sep 9, 2016 2pm – 3pm Mountain Time
Where	By phone (Andrew will conference everyone in) (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	alan.edwards@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • Mark Rogaczewski • BJ Kristiansen • alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_144.ics (1465 Bytes) cannot be converted to PDF format.

From: Todd Parfitt
To: andrew.kuhlmann@wyo.gov; Luke Esch; alan.edwards@wyo.gov; Connie Osborne
Subject: Invitation: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (Andrew Kuhlmann)
Date: Thursday, September 08, 2016 4:02:03 PM
Attachments: invite.ics

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar Andrew Kuhlmann

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- Luke Esch
- alan.edwards@wyo.gov
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for invitations on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_145.ics (1339 Bytes) cannot be converted to PDF format.

From: Todd Parfitt
To: luke.esch1@wyo.gov; alan.edwards@wyo.gov; andrew.kuhlmann@wyo.gov; Connie Osborne
Subject: Invitation: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (luke.esch1@wyo.gov)
Date: Thursday, September 08, 2016 4:02:04 PM
Attachments: invite.ics

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar luke.esch1@wyo.gov

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- alan.edwards@wyo.gov
- Luke Esch
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account luke.esch1@wyo.gov because you are subscribed for invitations on calendar luke.esch1@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_146.ics (1333 Bytes) cannot be converted to PDF format.

From: Todd Parfitt
To: alan.edwards@wyo.gov; Luke Esch; andrew.kuhlmann@wyo.gov; Connie Osborne
Subject: Invitation: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (alan.edwards@wyo.gov)
Date: Thursday, September 08, 2016 4:02:05 PM
Attachments: invite.ics

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar alan.edwards@wyo.gov

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- Luke Esch
- alan.edwards@wyo.gov
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_147.ics (1335 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; BJ Kristiansen; Mark Rogaczewski; Andrew Kuhlmann
Subject: Invitation: Brook Mine update @ Tue Sep 13, 2016 9am - 10am (alan.edwards@wyo.gov)
Date: Monday, September 12, 2016 3:59:29 PM
Attachments: invite.ics

Brook Mine update

more details »

I think this was the best time I could find on all of our calendars. Please let me know if a different time tomorrow morning works better.

When	Tue Sep 13, 2016 9am – 10am Mountain Time
Where	By phone - Andrew will all and conference in everyone (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	alan.edwards@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • BJ Kristiansen • alan.edwards@wyo.gov • Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_148.ics (1566 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: mark.rogaczewski@wyo.gov; alan.edwards@wyo.gov; BJ Kristiansen; Andrew Kuhlmann
Subject: Invitation: Brook Mine update @ Tue Sep 13, 2016 9am - 10am (mark.rogaczewski@wyo.gov)
Date: Monday, September 12, 2016 3:59:30 PM
Attachments: invite.ics

Brook Mine update

more details »

I think this was the best time I could find on all of our calendars. Please let me know if a different time tomorrow morning works better.

When	Tue Sep 13, 2016 9am – 10am Mountain Time
Where	By phone - Andrew will all and conference in everyone (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	mark.rogaczewski@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • alan.edwards@wyo.gov • BJ Kristiansen • Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_149.ics (1571 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: bj.kristiansen@wyo.gov; alan.edwards@wyo.gov; Mark Rogaczewski; Andrew Kuhlmann
Subject: Invitation: Brook Mine update @ Tue Sep 13, 2016 9am - 10am (bjarne.kristiansen@wyo.gov)
Date: Monday, September 12, 2016 3:59:32 PM
Attachments: invite.ics

Brook Mine update

more details »

I think this was the best time I could find on all of our calendars. Please let me know if a different time tomorrow morning works better.

When	Tue Sep 13, 2016 9am – 10am Mountain Time
Where	By phone - Andrew will all and conference in everyone (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/andrew-kuhlmann
Calendar	bjarne.kristiansen@wyo.gov
Who	• andrew.kuhlmann@wyo.gov - organizer • alan.edwards@wyo.gov • BJ Kristiansen • Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_150.ics (1569 Bytes) cannot be converted to PDF format.

From:	Todd Parfitt
To:	mark.rogaczewski@wyo.gov; Luke Esch; BJ Kristiansen; alan.edwards@wyo.gov; andrew.kuhlmann@wyo.gov; Connie Osborne
Subject:	Invitation: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (mark.rogaczewski@wyo.gov)
Date:	Tuesday, September 13, 2016 10:06:30 AM
Attachments:	invite.ics

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar mark.rogaczewski@wyo.gov

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- Luke Esch
- BJ Kristiansen
- alan.edwards@wyo.gov
- Mark Rogaczewski
- andrew.kuhlmann@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar mark.rogaczewski@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_151.ics (1623 Bytes) cannot be converted to PDF format.

From:	Todd Parfitt
To:	bj.kristiansen@wyo.gov; Mark Rogaczewski; andrew.kuhlmann@wyo.gov; Luke Esch; alan.edwards@wyo.gov; Connie Osborne
Subject:	Invitation: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (bjarne.kristiansen@wyo.gov)
Date:	Tuesday, September 13, 2016 10:06:31 AM
Attachments:	invite.ics

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar bjarne.kristiansen@wyo.gov

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- BJ Kristiansen
- Mark Rogaczewski
- andrew.kuhlmann@wyo.gov
- Luke Esch
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar bjarne.kristiansen@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_152.ics (1621 Bytes) cannot be converted to PDF format.

From: Google Calendar
To: Todd Parfitt; Todd Parfitt
Subject: Notification: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (Todd Parfitt)
Date: Thursday, September 15, 2016 2:49:47 PM

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar Todd Parfitt

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- andrew.kuhlmann@wyo.gov
- Luke Esch
- alan.edwards@wyo.gov
- BJ Kristiansen
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account todd.parfitt@wyo.gov because you are subscribed for notifications on calendar Todd Parfitt.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Alan Edwards; Todd Parfitt
Subject: Notification: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (alan.edwards@wyo.gov)
Date: Thursday, September 15, 2016 2:49:59 PM

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar alan.edwards@wyo.gov

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- alan.edwards@wyo.gov
- Mark Rogaczewski
- andrew.kuhlmann@wyo.gov
- Luke Esch
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for notifications on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Mark Rogaczewski; Todd Parfitt
Subject: Notification: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (Mark Rogaczewski)
Date: Thursday, September 15, 2016 2:50:01 PM

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar Mark Rogaczewski

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- BJ Kristiansen
- alan.edwards@wyo.gov
- Mark Rogaczewski
- andrew.kuhlmann@wyo.gov
- Luke Esch

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for notifications on calendar Mark Rogaczewski.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Andrew Kuhlmann; Todd Parfitt
Subject: Notification: Brook Mine @ Thu Sep 15, 2016 3pm - 4pm (Andrew Kuhlmann)
Date: Thursday, September 15, 2016 2:50:43 PM

Brook Mine

more details »

When Thu Sep 15, 2016 3pm – 4pm Mountain Time

Where Room 413 (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/todd-parfitt

Calendar Andrew Kuhlmann

Who
- Todd Parfitt - organizer
- Connie Osborne - creator
- Mark Rogaczewski
- alan.edwards@wyo.gov
- andrew.kuhlmann@wyo.gov
- Luke Esch
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account andrew.kuhlmann@wyo.gov because you are subscribed for notifications on calendar Andrew Kuhlmann.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Luke Esch
To:	Todd Parfitt; Andrew Kuhlmann; Alan Edwards
Subject:	Brook Mine Letter
Date:	Friday, September 16, 2016 1:26:21 PM
Attachments:	Brook Mine Representation Letter9.16.16.docx

Todd,

As requested, attached please find the draft letter for Dr. Bagley.

Please let me know if you have any questions.

Thanks,

--
Luke J. Esch
Administrator
Department of Environmental Quality,
Solid and Hazardous Waste Division
200 W 17th Street, 2nd Floor
Cheyenne, WY 82001
307-777-7192
luke.esch1@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

September 16, 2016

Chairman Dr. David Bagley
Wyoming Environmental Quality Council
122 W. 25th St.
Herschler Building 1W
Cheyenne, WY 82002

Re: Brook Mine Application Hearing on Order in Lieu of Consent

Dear Chairman Bagley:

Due to a scheduling conflict, I will be unable to attend the Wyoming Environmental Quality Council's September 28, 2016 meeting. However, Luke Esch, Administrator of the Wyoming Department of Environmental Quality. Solid and Hazardous Waste Division, will be in attendance and will represent the Department should the Council have any questions.

If you have any additional questions, please feel free to contact me at (307) 777-7937.

Sincerely,

Todd Parfitt
Director
Department of Environmental Quality

From: Andrew Kuhlmann
To: BJ Kristiansen
Subject: Copy of Round 6 Letter to Brook Mining
Date: Friday, September 16, 2016 4:09:35 PM

BJ,

When you have a chance, could you send me a PDF of the signed letter you sent to Brook Mining for this latest round of comments?

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Andrew Kuhlmann
Subject:	Attorney/Client privilege, Brrok Mine Round 6 comment letter
Date:	Monday, September 19, 2016 7:35:26 AM
Attachments:	Round 6 cover.pdf

Andrew,

Here is the Round 6 comment letter we sent to Ramaco. Let me know if you need anything else.

-bj

--

Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

CERTIFIED MAIL #7010 3090 0001 6474 2990
RETURN RECEIPT REQUESTED

September 16, 2016

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Round 5 Technical Review Responses, Brook Mine Coal Mine Permit Application, TFN 6 2/025

Dear Mr. Atkins,

The Land Quality Division received your amended Round 5 comment responses from your application for a Permit to Mine Coal on September 8, 2016. The statutory requirement for LQD to respond to the Brook Mine fifth round responses is 30 days from date of receipt, which is October 8, 2016. The responses have been reviewed in their entirety and no new comments or questions were generated for Round 6.

The deficiency from Round 5 related to the issue of surface owner consent to the Mine and Reclamation Plans for the Brook Mine remains in effect and still needs to be addressed.

Additionally, as a reminder, site access authorization from all surface owners necessary to enter the Brook Mine for mine inspections and compliance assurance activities must be obtained in writing and provided to LQD prior to permit approval. Site access is an issue previously discussed with Jeff Barron of WWC Engineering as the permit application has moved through the review process. Access authorization documents must be paginated and placed in the Adjudication section of the permit application.

Contact Bj Kristiansen or Mark Rogaczewski with questions or requests for clarification of the Round 6 findings. We will be happy to assist you in this process.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ/LQD District III

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

From:	Jim Ruby
To:	insutphin@hollandhart.com; Lynne Boomgaarden; Mistee Elliott; hal@lonabaugh.com; Andrew Kuhlmann
Cc:	Megan M. Degenfelder (CPE)
Subject:	Brook mine
Date:	Monday, September 26, 2016 2:51:04 PM

Dear Counsel:

I want to give you a heads up regarding your case. After discussions Ms. Degenfelder has decided that she should recuse herself from the discussions and vote in this matter due to a business relationship currently between Cloud Peak Energy and one of the parties.

If you have any questions please feel free to contact me.

Sincerely,

Jim Ruby

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Andrew Kuhlmann
To:	Todd Parfitt; Alan Edwards; Luke Esch
Cc:	Mark Rogaczewski; BJ Kristiansen
Subject:	Brook Mine hearing
Date:	Monday, September 26, 2016 4:23:45 PM

All,

A couple updates on the Brook Mine hearing this week:

1) Council Member Degenfelder has decided to recuse herself "due to a business relationship currently between Cloud Peak Energy and one of the parties." Jim Ruby sent a short FYI email out to the parties' attorneys and me to let us know. He did not give any other information, but it will be interesting to see how the council members will vote in light of this recusal.

2) It appears that the parties have not settled the case and will probably proceed to the hearing. They asked for and obtained a short delay of their deadline for filing proposed findings to the Council on the basis that the additional couple of days might allow them to settle. But that date passed and the parties filed the proposed findings of fact that the Council had requested.

3) The parties' proposed findings have been uploaded to the EQC docket if you are interested in reading them. BJ, I understand from your email earlier today that you are in the process of doing that already. I am also doing that.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Andrew Kuhlmann
Cc: Todd Parfitt; Alan Edwards; Luke Esch; BJ Kristiansen
Subject: Re: Brook Mine hearing
Date: Tuesday, September 27, 2016 7:25:59 AM

Thanks for the update.

Mark

On Mon, Sep 26, 2016 at 4:23 PM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> All,
>
> A couple updates on the Brook Mine hearing this week:
>
> 1) Council Member Degenfelder has decided to recuse herself "due to a business relationship currently between Cloud Peak Energy and one of the parties." Jim Ruby sent a short FYI email out to the parties' attorneys and me to let us know. He did not give any other information, but it will be interesting to see how the council members will vote in light of this recusal.
>
> 2) It appears that the parties have not settled the case and will probably proceed to the hearing. They asked for and obtained a short delay of their deadline for filing proposed findings to the Council on the basis that the additional couple of days might allow them to settle. But that date passed and the parties filed the proposed findings of fact that the Council had requested.
>
> 3) The parties' proposed findings have been uploaded to the EQC docket if you are interested in reading them. BJ, I understand from your email earlier today that you are in the process of doing that already. I am also doing that.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Mark Rogaczewski; Alan Edwards; andrew kuhlmann
Subject:	Brook mine surface owner agreement
Date:	Tuesday, September 27, 2016 4:15:29 PM

Gentlemen, Jeff Baron just called me. Brook has a Form 8 in hand from Padlock.
-bj

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	BJ Kristiansen
Cc:	Alan Edwards; andrew kuhlmann
Subject:	Re: Brook mine surface owner agreement
Date:	Wednesday, September 28, 2016 6:30:45 AM

BJ,

Thanks for the update.

Mark

On Tue, Sep 27, 2016 at 4:15 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen, Jeff Baron just called me. Brook has a Form 8 in hand from Padlock.
> -bj
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

From:	Keith Guille
To:	Kyle Wendtland; Andrew Kuhlmann
Subject:	Fwd: Brook Mine/Ramaco
Date:	Thursday, September 29, 2016 9:04:43 AM
Attachments:	image001.jpg

Do we have any statement or information on this decision? I did see the articles this morning regarding the EQC decision.

Keith Guille
Public Information Officer
Wyoming Department of Environmental Quality
keith.guille@wyo.gov
307-777-6105
307-631-3084

NOTE: We have moved offices. Our new address is 200 West 17th Street, Cheyenne, WY 82002

---------- Forwarded message ----------
From: **Laura Mojonnier** <laura.mojonnier@argusmedia.com>
Date: Thu, Sep 29, 2016 at 8:33 AM
Subject: Brook Mine/Ramaco
To: "keith.guille@wyo.gov" <keith.guille@wyo.gov>

Hi Keith,

I saw that the Environmental Quality Council voted to allow Ramaco to proceed with developing Brook Mine. I was wondering if you could confirm the vote count and if the DEQ had a statement on the approval?

Thanks,

Laura

Laura Mojonnier

Markets Reporter

www.argusmedia.com

Direct: +1 202 349 2881

Email: laura.mojonnier@argusmedia.com

Skype ID: argus_lauramojonnier

arg

Argus Media Tel: + 1 202 775 0240 | Fax: +1 202 872 8045

Argus Media Ltd., 1667 K Street NW, Suite 1150, Washington, DC 20006

The information contained in this email and its attachments is confidential and may be the subject of legal, professional or other privilege. It is intended only for the named addressees and may not be disclosed to anyone else without consent from Argus Media. If you are not the named addressee you must not use, disclose, distribute, copy, print or rely on the contents of this email and should destroy it immediately. Whilst Argus Media takes care to protect its systems from electronic virus attack or other harmful event, the firm gives no warranty that this email message (including any attachments to it) is free of any virus or other harmful matter and accepts no responsibility for any loss or damage resulting from the recipient receiving, opening or using it.

Argus Media Limited, Argus House, 175 St John Street, London EC1V 4LW
Registered in England and Wales, Company Registration No: 1642534
VAT Registration No: GB 229 7149 41

The information contained in this email and its attachments is confidential and may be the subject of legal, professional or other privilege. It is intended only for the named addressees and may not be disclosed to anyone else without consent from Argus Media. If you are not the named addressee you must not use, disclose, distribute, copy, print or rely on the contents of this email and should destroy it immediately. Whilst Argus Media takes care to protect its systems from electronic virus attack or other harmful event, the firm gives no warranty that this email message (including any attachments to it) is free of any virus or other harmful matter and accepts no responsibility for any loss or damage resulting from the recipient receiving, opening or using it.

Argus Media Limited, Argus House, 175 St John Street, London EC1V 4LW Registered in England and Wales, Company Registration No: 1642534 VAT Registration No: GB 229 7149 41

This email has been scanned by the Symantec Email Security.cloud service.
For more information please visit http://www.symanteccloud.com

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

argus

From:	Andrew Kuhlmann
To:	Keith Guille
Cc:	Kyle Wendtland
Subject:	Re: Brook Mine/Ramaco
Date:	Thursday, September 29, 2016 11:19:39 AM

Keith,

Kyle has a potential conflict of interest regarding the Brook Mine application, so I have been working with Todd, Alan, and Luke on the application and the EQC proceeding.

I was at the hearing yesterday and I'm happy to get you up to speed on what happened and what the EQC's decision actually means. Feel free to give me a call today. I may be unavailable a couple hours around lunchtime, but otherwise I should be generally around my office.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

From: Carol Bilbrough
To: Muthu Kuchanur; Matthew Kunze; Tammi Pusheck; Craig Hults; Jennifer Mickle; Kelsey Hart
Subject: Fwd: Media inquiries
Date: Thursday, September 29, 2016 2:56:25 PM

Hi everyone, please see the message below regarding public info requests from reporters. Kyle specifically states regarding the Brooks Mine, but I would also include any questions regarding bonding and bankruptcy. If someone is asking for a statement, please refer them to Keith Guille. If it is a records request, business as usual.

Carol

---------- Forwarded message ----------
From: **Kim Pandullo** <kim.pandullo@wyo.gov>
Date: Thu, Sep 29, 2016 at 1:52 PM
Subject: Media inquiries
To: Carol Bilbrough <carol.bilbrough@wyo.gov>, Robin Jones <robin.jones@wyo.gov>, Ryan Schierman <ryan.schierman@wyo.gov>, Mark Rogaczewski <mark.rogaczewski@wyo.gov>, Nancy Williams <nancy.williams@wyo.gov>, "Wood, Brian" <brian.wood@wyo.gov>, Stacy Page <stacy.page@wyo.gov>

Please pass on the following message from Kyle to all staff members:

If any calls are received regarding the Brook Mine (from reporters of any kind) please refer them to Keith Guille. 307-777-6105.

Thank you and have a wonderful day!!

Kim Pandullo
Administrators' Secretary
Office Support Specialist II
State of Wyoming
DEQ-Land Quality Division **Note: NEW ADDRESS**
200 W. 17th St., Suite 10
Cheyenne, WY 82002
kim.pandullo@wyo.gov
(307) 777-7655
fax (307) 635-1784

*****Confidentiality Notice*****
This message and any attachments are only for the use of the intended recipient(s), are confidential, and may be privileged. If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of all or any portion of this message and any attachments is strictly prohibited. If you are not the intended recipient, please notify the sender immediately by return e-mail, and delete this message and any attachments permanently from your system.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Carol Bilbrough, PhD
Program Manager
WDEQ Land Quality Division
307-777-6772
carol.bilbrough@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Brook Mine
Date: Friday, September 30, 2016 9:09:17 AM

Bj,

I saw that the EQC approved the order. Can you please give me a heads up when you are getting close to sending the application to final public notice so I know when we should send the draft CHIA to review.

Thanks, Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Lynne Boomgaarden
To:	andrew kuhlmann (andrew.kuhlmann@wyo.gov)
Cc:	ryan.schelhaas@wyo.gov; Michael Klein (m.klein@lhr-inc.com)
Subject:	EQC Order in Lieu of Consent - Big Horn Coal
Date:	Thursday, October 06, 2016 9:15:17 AM
Attachments:	image001.jpg

Good morning Andrew. In follow up to a voicemail message I just left for you, I received a voicemail message from Tom Sansonetti late yesterday afternoon. Tom represented that he was calling on behalf of DEQ and the Attorney General's office concerning language to be included in the order in lieu of consent regarding DEQ access to Big Horn Coal surface to inspect Ramaco's operations. I would prefer to visit with you and/or Ryan directly regarding any questions or issues you have and Big Horn Coal's position on this issue. I'll be glad to follow up with Mr. Sansonetti after we've spoken.

I will be in my office today until 4:00 and in the office tomorrow until noon. I'd be glad to visit by telephone or I can come to your office.

Thank you,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT

406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	James Kaste
To:	JSPope@hollandhart.com; INSutphin@hollandhart.com; lboomgaarden@crowleyfleck.com
Cc:	Andrew Kuhlmann; Alan Edwards
Subject:	Draft Consent for DEQ Access
Date:	Friday, October 07, 2016 11:01:40 AM
Attachments:	Surface Consent for DEQ Access.docx

Lynne, Jeff and Isaac,

Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.

Thanks,

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

SURFACE LANDOWNER'S CONSENT

I, _____*[Land Owner]*_____, (Land Owner) CERTIFY that I am the surface owner of the following described property on which _____*[Applicant]*_____ (Applicant) proposes to operate or property which must be crossed to access Applicant's operations as proposed in Applicant's mining and reclamation plans:

[Property Description]

Land Owner and Applicant are parties to an action pending before the Wyoming Environmental Quality Council entitled *In Re Brook Mine Application*, Civil Action No. 16-1601. Without waiving any rights which Land Owner may have in that action or any subsequent appeal, if Applicant's permit is granted by the Wyoming Department of Environmental Quality, I hereby grant unrestricted access to the above described property to the Department of Environmental Quality and its agents, contractors, assigns, and invitees, to enter and carry out inspections of and collect resource data from the above operations during normal business hours. Nothing in this consent should be construed as consent by Land Owner to Applicant's mining and reclamation plans or consent to enter and carry out those mining and reclamation programs on said lands except as may be ordered by the Wyoming Environmental Quality Council or a court of competent jurisdiction.

Dated this _____ day of _____, 20____.

_____

Surface Landowner (Signature)

_____
Name (printed or typed)

STATE OF WYOMING)
) ss.
COUNTY OF _____)

Subscribed and sworn to before me by _____ this ____ day of _____, 20____.

Witness my hand and official seal.

SEAL

_____
Notary Public

My Commission expires _____

From:	Lynne Boomgaarden
To:	james.kaste@wyo.gov
Cc:	Thomas Sansonetti; j.sweeney@lhr-inc.com; Michael Klein (m.klein@lhr-inc.com); Jeffrey S. Pope; Isaac Sutphin; andrew kuhlmann (andrew.kuhlmann@wyo.gov); alan.edwards@wyo.gov
Subject:	Big Horn Coal / Brook Mine
Date:	Friday, October 07, 2016 11:12:10 AM
Attachments:	20161007103326843.pdf image001.jpg

James –
Thank you for your return call this morning. I have spoken with Mr. Sansonetti regarding our discussion. I have attached the FORM 8 that Big Horn Coal received in February 2016 from Ramaco. As you can see, nothing in that FORM 8 references DEQ access to BHC lands; moreover, as you and I discussed, the forthcoming order in lieu of Big Horn Coal's consent to the Brook Mine and Reclamation Plan does not seem to be the appropriate vehicle by which to address DEQ's rights to access Big Horn Coal surface for purposes of inspecting Brook Mine operations if and when DEQ issues a mine permit to Brook Mine.

Accordingly, I'm happy to have just received a draft surface owner's consent form from you for Big Horn Coal's consideration. Due to prior commitments it will be early next week before I will be able to get back with you regarding any proposed revisions to or possible concerns with the proposed access agreement.

I appreciate your assistance in identifying an appropriate and expedient resolution of the DEQ access issue and will be back in touch as soon as possible next week.
Best regards,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

WWC ENGINEERING

1849 Terra Avenue – Sheridan, WY 82801 – (307) 672-0761
Fax (307) 674-4265 – Website: www.wwcengineering.com

February 3, 2016

Mr. Dan Spec
Chief Operating Officer
Lighthouse Resources Inc.
170 South Main Street Suite 700
Salt Lake City UT 84101

RE: Brook Mine- Wyoming Department of Environmental Land Quality Division (WDEQ/LQD) Surface Owner Consent Request

Dear Mr. Spec:

As you are aware from the mine and reclamation plans and material previously provided to you on July 23, 2014, Brook Mining Co., LLC has proposed to conduct coal mining on lands in Sheridan County, which will be called the Brook Mine. Big Horn Coal, or an affiliated entity, holds limited surface owner rights on a portion of this land. At this time, the revised mine plan and reclamation plan have been deemed technically adequate and in compliance with the Wyoming Environmental Quality Act by WDEQ/LQD.

As part of its application, WDEQ/LQD requires that the attached Form 8 surface owner consent to the revised mine and reclamation plan be provided for the affected lands. If consent cannot be obtained by Brook Mining Co., LLC, an order in lieu of consent will be sought from the Wyoming Environmental Quality Council.

We request that you please review and sign the semi-completed attached form 8. Additional revised, mine and reclamation plans that have been publically available starting November 3, 2014 have been provided here with this letter for your review. The requested form 8 consent involves property subject to a surface mining consent reservation in favor of RAMACO Wyoming, LLC contained in deeds between the predecessor parties.

Ramaco requests that upon review, that you sign and date four (4) originals of the provided Form 8. We would appreciate return of this consent no later than by February 19, 2016.

Please contact, the undersigned at WWC Engineering- (ph: 307-672-0761) if you have any questions or comments regarding this request.

Sincerely,

Jeff Barron, P.E.

JB/hjr
Attachment: as noted
K:\Sheridan\RAMACO\13139 Brook Mine Phase 1\Adjudication\form_8\Cover_letter_Lighthouse _2_3_2016.doc

SURFACE LANDOWNER'S CONSENT

I, _____, CERTIFY that I hold surface rights on the following lands on which See Attachment A holds mineral estate rights:

See Attachment B	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.

County of Sheridan.

I have examined the mining plans and reclamation plan prepared by RAMACO WYOMING, LLC in compliance with the Wyoming ENVIRONMENTAL QUALITY ACT, and do hereby approve said plans, and give my consent to enter and carry out said mining and reclamation programs on said lands as proposed therein.

Dated this _____ day of _____ , 2016 .

_____
Surface Landowner (Signature)

_____
Name (printed or typed)

_____
(Witness) (Date)

Form 8
Rev. 10/99

Attachment A

RAMACO Wyoming, LLC
Pine Mountain Oil and Gas, Inc.

Attachment B

NW/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 NW/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
NE/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
NE/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
SW/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
SE/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
NW/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
NE/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 NE/4	Section	15	, T.	57	N.,R.	84	W.
SW/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
SE/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
SW/4 NE/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
NE/4 SE/4 (PT)	Section	15	, T.	57	N.,R.	84	W.
SE/4 SW/4 (PT)	Section	15	, T.	57	N.,R.	84	W.
SW/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
SE/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
NE/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.

NW/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
SW/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SW/4 NE/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 SE/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SW/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.

SURFACE LANDOWNER'S CONSENT

I, _____, CERTIFY that I hold surface rights on the following lands on which See Attachment A holds mineral estate rights:

See Attachment B	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.

County of Sheridan.

I have examined the mining plans and reclamation plan prepared by RAMACO WYOMING, LLC in compliance with the Wyoming ENVIRONMENTAL QUALITY ACT, and do hereby approve said plans, and give my consent to enter and carry out said mining and reclamation programs on said lands as proposed therein.

Dated this _____ day of _____, 2016 .

_____
Surface Landowner (Signature)

_____
Name (printed or typed)

_____
(Witness) (Date)

Form 8
Rev. 10/99

Attachment A

RAMACO Wyoming, LLC
Pine Mountain Oil and Gas, Inc.

Attachment B

NW/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 NW/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
NE/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
NE/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
SW/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
SE/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
NW/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
NE/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 NE/4	Section	15	, T.	57	N.,R.	84	W.
SW/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
SE/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
SW/4 NE/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
NE/4 SE/4 (PT)	Section	15	, T.	57	N.,R.	84	W.
SE/4 SW/4 (PT)	Section	15	, T.	57	N.,R.	84	W.
SW/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
SE/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
NE/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.

NW/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
SW/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SW/4 NE/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 SE/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SW/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.

SURFACE LANDOWNER'S CONSENT

I, _____, CERTIFY that I hold surface rights on the following lands on which ___See Attachment A_____ holds mineral estate rights:

See Attachment B	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.

County of ___Sheridan_____.

I have examined the mining plans and reclamation plan prepared by _____RAMACO WYOMING, LLC_____ in compliance with the Wyoming ENVIRONMENTAL QUALITY ACT, and do hereby approve said plans, and give my consent to enter and carry out said mining and reclamation programs on said lands as proposed therein.

Dated this _____ day of _____, 2016 .

_____
Surface Landowner (Signature)

_____
Name (printed or typed)

_____
(Witness) (Date)

Form 8
Rev. 10/99

Attachment A

RAMACO Wyoming, LLC
Pine Mountain Oil and Gas, Inc.

Attachment B

NW/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 NW/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
NE/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
NE/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
SW/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
SE/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
NW/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
NE/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 NE/4	Section	15	, T.	57	N.,R.	84	W.
SW/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
SE/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
SW/4 NE/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
NE/4 SE/4 (PT)	Section	15	, T.	57	N.,R.	84	W.
SE/4 SW/4 (PT)	Section	15	, T.	57	N.,R.	84	W.
SW/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
SE/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
NE/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.

NW/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
SW/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SW/4 NE/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 SE/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SW/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.

SURFACE LANDOWNER'S CONSENT

I, _____, CERTIFY that I hold surface rights on the following lands on which See Attachment A holds mineral estate rights:

See Attachment B	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.
_____	Section	_____	, T.	_____	N.,R.	_____	W.

County of Sheridan.

I have examined the mining plans and reclamation plan prepared by RAMACO WYOMING, LLC in compliance with the Wyoming ENVIRONMENTAL QUALITY ACT, and do hereby approve said plans, and give my consent to enter and carry out said mining and reclamation programs on said lands as proposed therein.

Dated this _____ day of _____, 2016 .

_____
Surface Landowner (Signature)

_____
Name (printed or typed)

_____
(Witness) (Date)

Form 8
Rev. 10/99

Attachment A

RAMACO Wyoming, LLC
Pine Mountain Oil and Gas, Inc.

Attachment B

NW/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 NW/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 NE/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
NE/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
NE/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 SW/4	Section	9	, T.	57	N.,R.	84	W.
SW/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
SE/4 SE/4	Section	9	, T.	57	N.,R.	84	W.
NW/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
SW/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
SE/4 SW/4	Section	10	, T.	57	N.,R.	84	W.
NW/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
NE/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 NE/4	Section	15	, T.	57	N.,R.	84	W.
SW/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
SE/4 NW/4	Section	15	, T.	57	N.,R.	84	W.
SW/4 NE/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
NE/4 SE/4 (PT)	Section	15	, T.	57	N.,R.	84	W.
SE/4 SW/4 (PT)	Section	15	, T.	57	N.,R.	84	W.
SW/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
SE/4 SE/4	Section	15	, T.	57	N.,R.	84	W.
NW/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
NE/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.

NW/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
SW/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 NW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SW/4 NE/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 NE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
NW/4 SE/4	Section	22	, T.	57	N.,R.	84	W.
NE/4 SE/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SW/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
SE/4 SW/4 (PT)	Section	22	, T.	57	N.,R.	84	W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Alan Edwards
To:	Todd Parfitt
Subject:	Fwd: Draft Consent for DEQ Access
Date:	Friday, October 07, 2016 11:27:07 AM
Attachments:	Surface Consent for DEQ Access.docx

The meeting with Brook has been cancelled. Attached is the draft language prepared by James and sent to BigHorn and Brook. Alan

---------- Forwarded message ----------
From: **James Kaste** <james.kaste@wyo.gov>
Date: Fri, Oct 7, 2016 at 11:01 AM
Subject: Draft Consent for DEQ Access
To: JSPope@hollandhart.com, INSutphin@hollandhart.com, lboomgaarden@crowleyfleck.com
Cc: Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>

Lynne, Jeff and Isaac,

Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.

Thanks,

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

SURFACE LANDOWNER'S CONSENT

I, _____*[Land Owner]*_____, (Land Owner) CERTIFY that I am the surface owner of the following described property on which _____*[Applicant]*_____ (Applicant) proposes to operate or property which must be crossed to access Applicant's operations as proposed in Applicant's mining and reclamation plans:

[Property Description]

Land Owner and Applicant are parties to an action pending before the Wyoming Environmental Quality Council entitled *In Re Brook Mine Application*, Civil Action No. 16-1601. Without waiving any rights which Land Owner may have in that action or any subsequent appeal, if Applicant's permit is granted by the Wyoming Department of Environmental Quality, I hereby grant unrestricted access to the above described property to the Department of Environmental Quality and its agents, contractors, assigns, and invitees, to enter and carry out inspections of and collect resource data from the above operations during normal business hours. Nothing in this consent should be construed as consent by Land Owner to Applicant's mining and reclamation plans or consent to enter and carry out those mining and reclamation programs on said lands except as may be ordered by the Wyoming Environmental Quality Council or a court of competent jurisdiction.

Dated this _____ day of _____, 20____.

_____

Surface Landowner (Signature)

_____
Name (printed or typed)

STATE OF WYOMING)
) ss.
COUNTY OF _____)

Subscribed and sworn to before me by _____ this ____ day of _____, 20____.

Witness my hand and official seal.

SEAL

_____
Notary Public

My Commission expires _____

From: BJ Kristiansen
To: Matthew Kunze
Subject: Re: Brook Mine
Date: Friday, October 07, 2016 1:54:18 PM

Matt,

I was hoping to have a timetable for you by now but no such luck. As soon as the EQC Order in Lieu of Consent is issued, we will go to second notice. I'll let you know but don't hold your breath, I have no idea how long they will take.

-bj

On Fri, Sep 30, 2016 at 9:08 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Bj,
>
> I saw that the EQC approved the order. Can you please give me a heads up when you are getting close to sending the application to final public notice so I know when we should send the draft CHIA to review.
>
> Thanks, Matt
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Brook Mine
Date: Friday, October 07, 2016 1:57:45 PM

Ok thanks for the update. I will just wait until I hear something from you.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Fri, Oct 7, 2016 at 1:54 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> I was hoping to have a timetable for you by now but no such luck. As soon as the EQC Order in Lieu of Consent is issued, we will go to second notice. I'll let you know but don't hold your breath, I have no idea how long they will take.
>
> -bj
>
> On Fri, Sep 30, 2016 at 9:08 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Bj,
>>
>> I saw that the EQC approved the order. Can you please give me a heads up when you are getting close to sending the application to final public notice so I know when we should send the draft CHIA to review.
>>
>> Thanks, Matt
>>
>> ---
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055
>> matthew.kunze@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Jeffrey S. Pope
To:	James Kaste; Isaac Sutphin; lboomgaarden@crowleyfleck.com
Cc:	Andrew Kuhlmann; Alan Edwards
Subject:	RE: Draft Consent for DEQ Access
Date:	Friday, October 07, 2016 3:29:28 PM
Attachments:	CONSENT TO ACCESS PRIVATE PROPERTY_BHC_WDEQ.PDF Surface Consent for DEQ Access - HH edits.DOCX

Hi James,

The Brook team has reviewed the document you put together. We have one small proposed change based on how DEQ phrased its Round 6 comments. As noted in the attached reline, DEQ has required access before it will issue a permit. So we do not think that access can be contingent on the permit. Otherwise, a loop is created about whether DEQ could not issue the permit.

The proposed change should not affect Big Horn's right to appeal or waive any arguments.

We have also taken the liberty of preparing a land description to include as an attachment to the document. I have attached that for everyone's review.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 11:01 AM
To: Jeffrey S. Pope; Isaac Sutphin; lboomgaarden@crowleyfleck.com
Cc: Andrew Kuhlmann; Alan Edwards
Subject: Draft Consent for DEQ Access

Lynne, Jeff and Isaac,

Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.

Thanks,

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax

james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

ATTACHMENT A

[Description of Big Horn Coal Co. and PKS Co. within current Brook Mine Permit area]

Township 57 North, Range 84 West, 6th P.M., Sheridan County, WY

Section 9: SW¼NW¼, SW¼, SE¼ part containing 159 acres more or less, SW¼NE¼ part containing 36 acres more or less, SE¼NE¼ part containing 8 acres more or less, NW¼NE¼ part containing 5 acres more or less

Section 10: SW¼ part containing 73 acres more or less

Section 15: NW¼, W½NE¼ part containing 42 acres more or less, SE¼ part containing 88 acres more or less, SE¼SW¼ part containing 4 acres more or less

Section 21: NE¼ part containing 36 acres more or less, NW¼ part containing 5 acres more or less

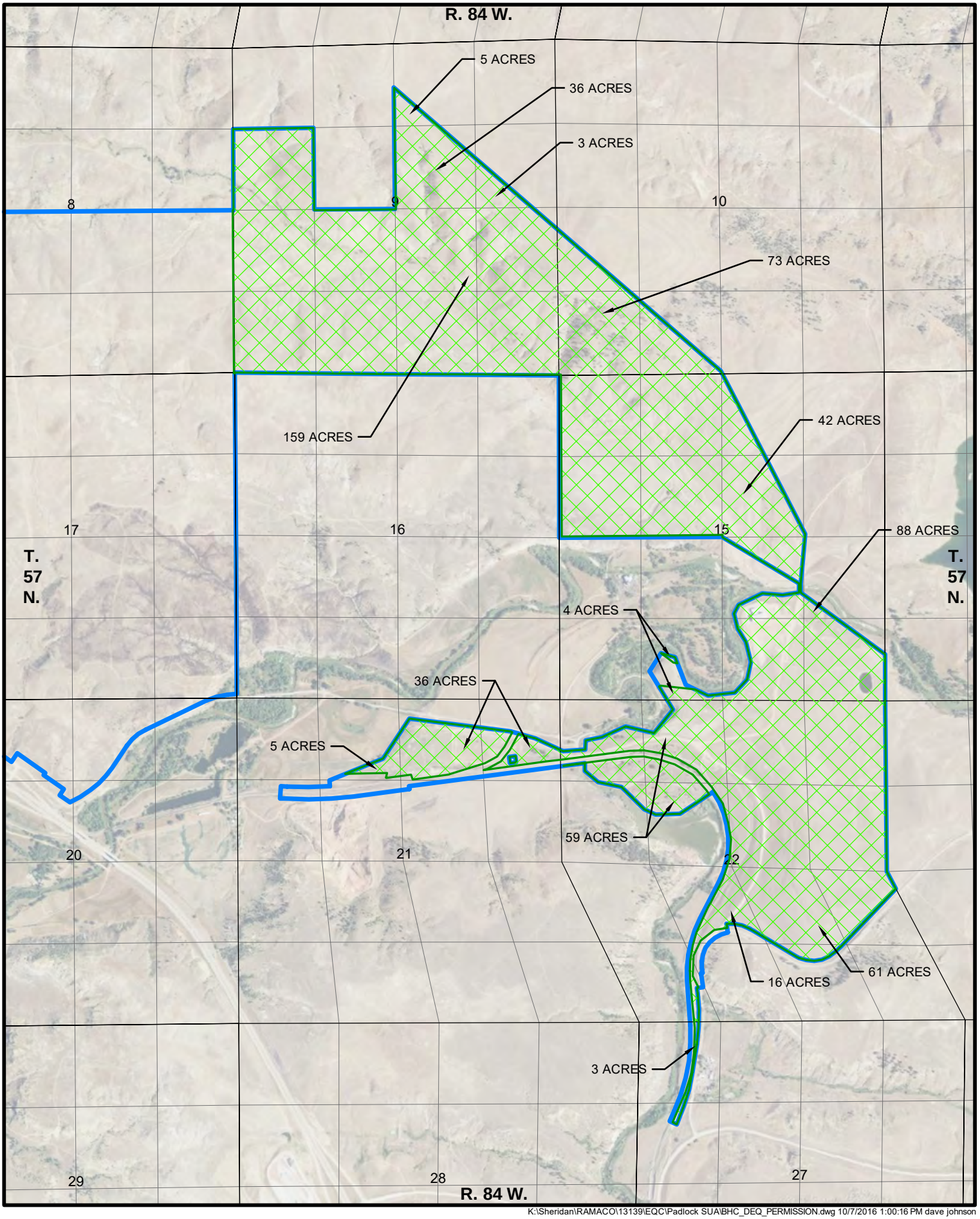
Section 22: NW¼ part containing 59 acres more or less, NE¼, SE¼ part containing 61 acres more or less, SW¼ part containing 16 acres more or less

Section 27: W½NW¼ part containing 3 acres more or less

(the "Big Horn Coal Co. and PKS Co. Surface Lands" Exhibit B)

EXHIBIT B

(BIG HORN COAL SURFACE LANDS)



K:\Sheridan\RAMACO\13139\EQC\Padlock SUA\BHC_DEQ_PERMISSION.dwg 10/7/2016 1:00:16 PM dave johnson

SURFACE LANDOWNER'S CONSENT

I, _____*[Land Owner]*_____, (Land Owner) CERTIFY that I am the surface owner of the following described property on which _____*[Applicant]*_____ (Applicant) proposes to operate or property which must be crossed to access Applicant's operations as proposed in Applicant's mining and reclamation plans:

~~*[Property Description]*~~*As described in the attached Attachment A, incorporated herein*

Land Owner and Applicant are parties to an action pending before the Wyoming Environmental Quality Council entitled *In Re Brook Mine Application*, Civil Action No. 16-1601. Without waiving any rights which Land Owner may have in that action or any subsequent appeal, ~~if Applicant's permit is granted by the Wyoming Department of Environmental Quality,~~ I hereby grant unrestricted access to the above described property to the Department of Environmental Quality and its agents, contractors, assigns, and invitees, to enter and carry out inspections of and collect resource data from the above operations during normal business hours. Nothing in this consent should be construed as consent by Land Owner to Applicant's mining and reclamation plans or consent to enter and carry out those mining and reclamation programs on said lands except as may be ordered by the Wyoming Environmental Quality Council or a court of competent jurisdiction.

Commented [JSP1]: DEQ's Round 6 comments have said that our permit will not be granted until we get access. Leaving this provision in would create an impossible loop where DEQ has access if the permit goes forward but DEQ will issue the permit only if we have access.

Taking this out should still preserve BHC's ability to protect its right to appeal.

Dated this _____ day of _____, 20____.

_____

Surface Landowner (Signature)

_____
Name (printed or typed)

STATE OF WYOMING)
) ss.
COUNTY OF _____)

Subscribed and sworn to before me by _____ this ____ day of _____, 20____.

Witness my hand and official seal.

SEAL

_____
Notary Public

My Commission expires _____

From:	Lynne Boomgaarden
To:	James Kaste
Cc:	Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Michael Klein (m.klein@lhr-inc.com); Jeffrey S. Pope
Subject:	RE: Draft Consent for DEQ Access
Date:	Tuesday, October 11, 2016 1:56:39 PM
Attachments:	Clean BHC Proposed Surface Consent for DEQ Access - 10.11.16.DOCX BHC Proposed Surface Consent for DEQ Access - 10.11.16.DOCX CONSENT TO ACCESS PRIVATE PROPERTY_BHC_WDEQ.PDF scanner_lonabaugh_com_20160927_180457.pdf image001.jpg

---

James –
I have attached for your consideration a red-line and clean version of the Draft Consent to include Big Horn Coal Company's proposed edits. Please note that I made a few additional non-substantive edits on the clean version. I have also attached a copy of the Form 8 that Padlock Ranch signed as provided to me by Mr. Sansonetti. Finally, I have attached a copy of the Attachment A that Mr. Pope provided with notes from Big Horn Coal. As you can see on the attached Attachment A there is one acreage discrepancy that should be clarified. Also, I request that any reference to PKS Co. be deleted from Attachment A, as Big Horn Coal is the only party to the order in lieu of consent proceedings (in any event the correct reference would be to KCP Properties Inc., not PKS). I suggest that the Map labeled as Exhibit B, be re-labeled as Exhibit 1 to Attachment A, for clarification purposes.

Please let me know if you have questions or concerns or would like to discuss this further.
Best regards,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 4:34 PM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>; Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Thank you. I will look forward to Lynne's comments next week.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Fri, Oct 7, 2016 at 3:28 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> The Brook team has reviewed the document you put together. We have one small proposed change based on how DEQ phrased its Round 6 comments. As noted in the attached reline, DEQ has required access before it will issue a permit. So we do not think that access can be contingent on the permit. Otherwise, a loop is created about whether DEQ could not issue the permit.

The proposed change should not affect Big Horn's right to appeal or waive any arguments.

We have also taken the liberty of preparing a land description to include as an attachment to the document. I have attached that for everyone's review.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 11:01 AM
To: Jeffrey S. Pope; Isaac Sutphin; lboomgaarden@crowleyfleck.com
Cc: Andrew Kuhlmann; Alan Edwards
Subject: Draft Consent for DEQ Access

Lynne, Jeff and Isaac,

Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.

Thanks,

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

SURFACE LAND OWNER'S CONSENT

Big Horn Coal Company, LLC (Surface Land Owner) CERTIFIES that it is the surface owner of the following described property on which Brook Mining Company, LLC (Applicant) proposes to operate or property which must be crossed to access Applicant's operations as proposed in Applicant's mining and reclamation plans:

As described in the attached Attachment A, incorporated herein

Land Owner and Applicant are parties to an action pending before the Wyoming Environmental Quality Council entitled *In Re Brook Mine Application*, Civil Action No. 16-1601. Without waiving any rights which Land Owner may have in that action or any subsequent appeal, Land Owner hereby grants access to the above described property to the Department of Environmental Quality, Land Quality Division, to enter and carry out mine inspections related to Applicant's permitted operations. Such entry and inspections shall be conducted during normal business hours and in compliance with all applicable federal, state and local laws, permit conditions, and mining industry safety practices. Nothing in this consent should be construed as consent by Land Owner to Applicant's mining and reclamation plans or consent to enter and carry out those mining and reclamation programs on said lands except as may be ordered by the Wyoming Environmental Quality Council or a court of competent jurisdiction.

Dated this _____ day of _____, 20____.

_____
Surface Land Owner (Signature)

_____
Name (printed or typed)

STATE OF _____)
) ss.
COUNTY OF _____)

Subscribed and sworn to before me by _____ this ____ day of _____, 20____.

Witness my hand and official seal.

SEAL

_____
Notary Public

My Commission expires _____

SURFACE LANDOWNER'S CONSENT

~~I, *[Land Owner]*~~ Big Horn Coal Company, LLC (Land Owner) CERTIFIES~~Y~~ that ~~I am~~it is the surface owner of the following described property on which Brook Mining Company, LLC ~~*[Applicant]*~~ (Applicant) proposes to operate or property which must be crossed to access Applicant's operations as proposed in Applicant's mining and reclamation plans:

As described in the attached Attachment A, incorporated herein

Land Owner and Applicant are parties to an action pending before the Wyoming Environmental Quality Council entitled *In Re Brook Mine Application*, Civil Action No. 16-1601. Without waiving any rights which Land Owner may have in that action or any subsequent appeal, ~~I~~ Land Owner hereby grants ~~unrestricted~~ access to the above described property to the Department of Environmental Quality, Land Quality Division ~~and its agents, contractors, assigns, and invitees~~, to enter and carry out mine inspections related to Applicant's permitted operations. Such entry and inspections shall be conducted ~~of and collect resource data from the above operations~~ during normal business hours and in compliance with all applicable~~. Access is granted subject to the Department of Environmental Quality, its employees, agents or representatives complying with~~ federal, state and local laws, permit conditions, and mining industry ~~standard~~ safety practices~~. that appertain to the property.~~ Nothing in this consent should be construed as consent by Land Owner to Applicant's mining and reclamation plans or consent to enter and carry out those mining and reclamation programs on said lands except as may be ordered by the Wyoming Environmental Quality Council or a court of competent jurisdiction.

Dated this _____ day of _____, 20____.

Commented [JSP1]: DEQ's Round 6 comments have said that our permit will not be granted until we get access. Leaving this provision in would create an impossible loop where DEQ has access if the permit goes forward but DEQ will issue the permit only if we have access.

Taking this out should still preserve BHC's ability to protect its right to appeal.

Commented [LB2]: This is the same language included in the Form 8 that Padlock signed.

_____
Surface Landowner (Signature)

_____
Name (printed or typed)

STATE OF WYOMING)
) ss.
COUNTY OF _____)

Subscribed and sworn to before me by _____ this ____ day of _____, 20____.

Witness my hand and official seal.

SEAL

_____
Notary Public

My Commission expires _____

ATTACHMENT A

[Description of Big Horn Coal Co. and PKS Co. within current Brook Mine Permit area]

Township 57 North, Range 84 West, 6th P.M., Sheridan County, WY

Section 9: SW¼NW¼, SW¼, SE¼ part containing 159 acres more or less, SW¼NE¼ part containing 36 acres more or less, SE¼NE¼ part containing 8 acres more or less, NW¼NE¼ part containing 5 acres more or less

Section 10: SW¼ part containing 73 acres more or less

Section 15: NW¼, W½NE¼ part containing 42 acres more or less, SE¼ part containing 88 acres more or less, SE¼SW¼ part containing 4 acres more or less

Section 21: NE¼ part containing 36 acres more or less, NW¼ part containing 5 acres more or less

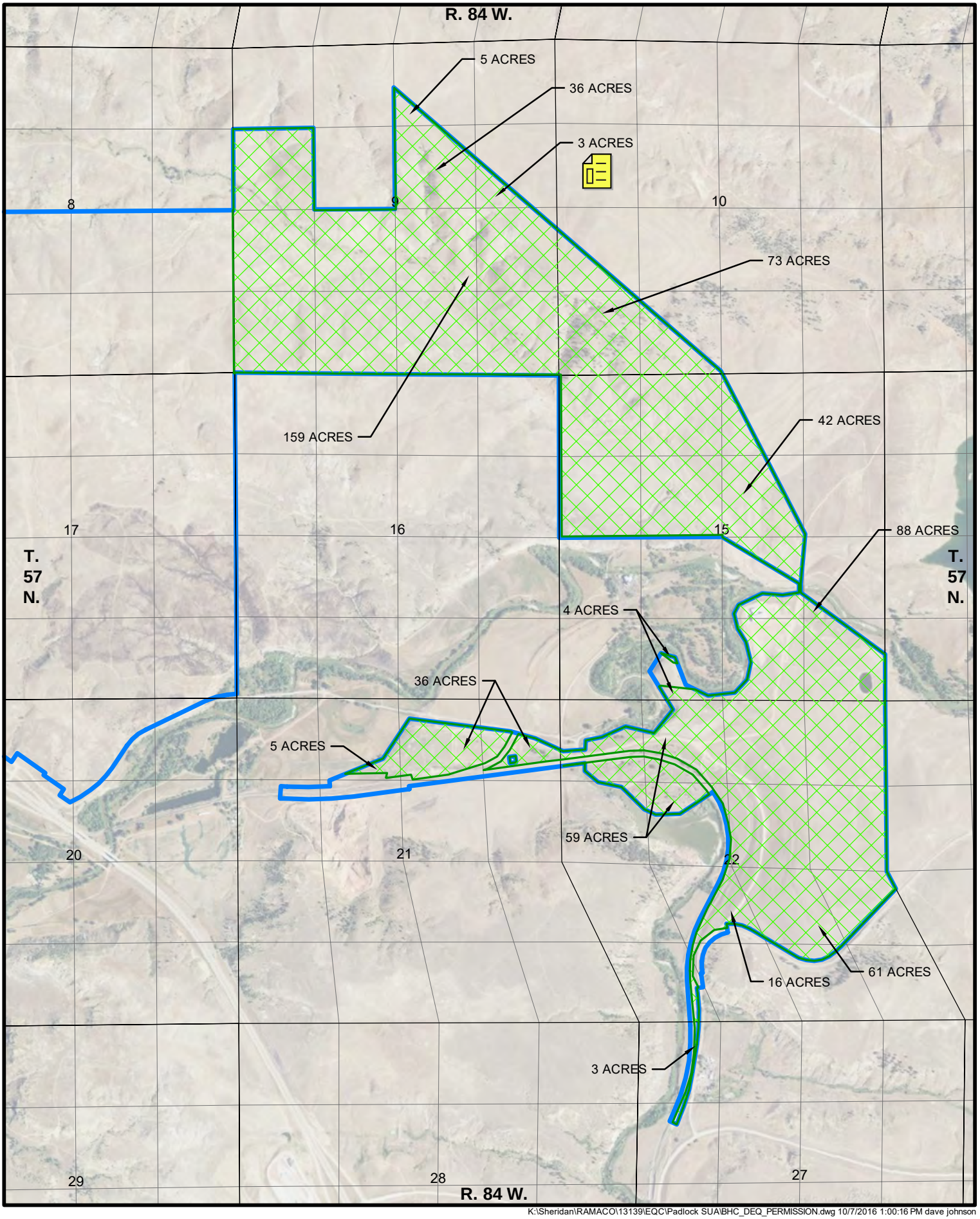
Section 22: NW¼ part containing 59 acres more or less, NE¼, SE¼ part containing 61 acres more or less, SW¼ part containing 16 acres more or less

Section 27: W½NW¼ part containing 3 acres more or less

(the "Big Horn Coal Co. and PKS Co. Surface Lands" Exhibit B)

EXHIBIT B

(BIG HORN COAL SURFACE LANDS)



K:\Sheridan\RAMACO\13139\EQC\Padlock SUA\BHC_DEQ_PERMISSION.dwg 10/7/2016 1:00:16 PM dave johnson

ACCEPTED AND AGREED EFFECTIVE THE DATE FIRST SET FORTH ABOVE:

OWNER:
Padlock Ranch Company

Hubert H. Patterson, III, President and CEO
Date: Sept 27, 2016

OPERATOR:
Ramaco Wyoming Coal Co., LLC

Randall W. Atkins, Chief Executive Officer
Date: _____

SURFACE LANDOWNER'S CONSENT

I, Hubert H. Patterson III, CERTIFY that **Padlock Ranch Company** holds surface access rights on the following lands on which See Attachment A holds mineral estate rights:

See Attachment B Section _____, T. _____ N.,R. _____ W.

_____ Section _____, T. _____ N.,R. _____ W.

_____ Section _____, T. _____ N.,R. _____ W.

_____ Section _____, T. _____ N.,R. _____ W.

_____ Section _____, T. _____ N.,R. _____ W.

_____ Section _____, T. _____ N.,R. _____ W.

_____ Section _____, T. _____ N.,R. _____ W.

_____ Section _____, T. _____ N.,R. _____ W.

County of Sheridan.

I have examined the mining plans and reclamation plans prepared by RAMACO WYOMING COAL CO., LLC in compliance with the Wyoming ENVIRONMENTAL QUALITY ACT, and do hereby approve said plans, and give my consent to enter and carry out said mining and reclamation programs on said lands as proposed therein. I do hereby also grant unrestricted access to the mine site to the Department of Environmental Quality, Land Quality Division to Enter and carry out mine inspections on said lands during normal business hours.

Dated this 27th day of September, 2016.

PADLOCK RANCH COMPANY

By: Hubert H. Patterson III

Hubert H. Patterson III, President and CEO

(Witness) 9/27/16 (Date)

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Jeffrey S. Pope
To:	James Kaste; Lynne Boomgaarden
Cc:	Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Michael Klein (m.klein@lhr-inc.com)
Subject:	RE: Draft Consent for DEQ Access
Date:	Tuesday, October 11, 2016 4:12:05 PM
Attachments:	CONSENT TO ACCESS PRIVATE PROPERTY_BHC_WDEQ_v2.pdf image001.jpg

---

James,

Brook has no objection to Lynne's changes. I have also attached the correct land description that Lynne requested.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Tuesday, October 11, 2016 2:17 PM
To: Lynne Boomgaarden
Cc: Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Michael Klein (m.klein@lhr-inc.com); Jeffrey S. Pope
Subject: Re: Draft Consent for DEQ Access

Lynne,

Thank you. Let me check in with the folks at DEQ and make sure they don't have any concerns and I'll get back to you by tomorrow.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 1:55 PM, Lynne Boomgaarden <lboomgaarden@crowleyfleck.com> wrote:

James –
I have attached for your consideration a red-line and clean version of the Draft Consent to include Big Horn Coal Company's proposed edits. Please note that I made a few additional non-substantive edits on the clean version. I have also attached a copy of the Form 8 that Padlock Ranch signed as provided to me by Mr. Sansonetti. Finally, I have attached a copy of the Attachment A that Mr. Pope provided with notes from Big Horn Coal. As you can see on the attached Attachment A there is one acreage discrepancy that should be clarified. Also, I request that any reference to PKS Co. be deleted from Attachment A, as Big Horn Coal is the only party to the order in lieu of consent proceedings (in any event the correct reference would be to KCP Properties Inc., not PKS). I suggest that the Map labeled as Exhibit B, be re-labeled as Exhibit 1 to Attachment A, for clarification purposes.

Please let me know if you have questions or concerns or would like to discuss this further.
Best regards,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com
From: James Kaste [mailto:james.kaste@wyo.gov]

Sent: Friday, October 07, 2016 4:34 PM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>; Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Thank you. I will look forward to Lynne's comments next week.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Fri, Oct 7, 2016 at 3:28 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> The Brook team has reviewed the document you put together. We have one small proposed change based on how DEQ phrased its Round 6 comments. As noted in the attached reline, DEQ has required access before it will issue a permit. So we do not think that access can be contingent on the permit. Otherwise, a loop is created about whether DEQ could not issue the permit.
>
> The proposed change should not affect Big Horn's right to appeal or waive any arguments.
>
> We have also taken the liberty of preparing a land description to include as an attachment to the document. I have attached that for everyone's review.
>
> Thanks,
>
> Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 11:01 AM
To: Jeffrey S. Pope; Isaac Sutphin; lboomgaarden@crowleyfleck.com
Cc: Andrew Kuhlmann; Alan Edwards
Subject: Draft Consent for DEQ Access

Lynne, Jeff and Isaac,

Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.

Thanks,

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

ATTACHMENT A

[Description of Big Horn Coal Co. lands within current Brook Mine Permit area]

Township 57 North, Range 84 West, 6th P.M., Sheridan County, WY

Section 9: SW¼NW¼, SW¼, SE¼ part containing 159 acres more or less, SW¼NE¼ part containing 36 acres more or less, SE¼NE¼ part containing 8 acres more or less, NW¼NE¼ part containing 5 acres more or less

Section 10: SW¼ part containing 73 acres more or less

Section 15: NW¼, W½NE¼ part containing 42 acres more or less, SE¼ part containing 88 acres more or less, SE¼SW¼ part containing 4 acres more or less

Section 21: NE¼ part containing 36 acres more or less, NW¼ part containing 5 acres more or less

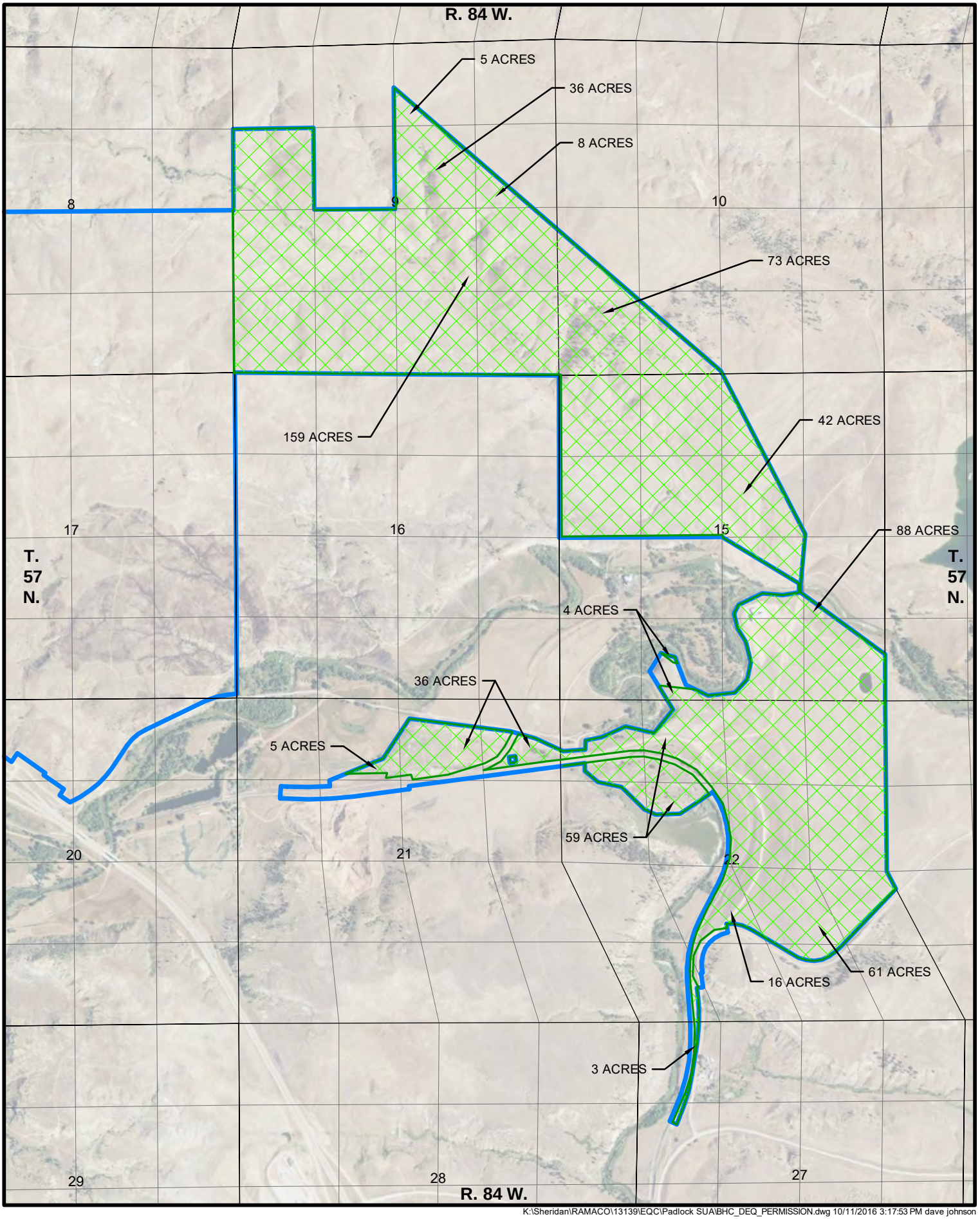
Section 22: NW¼ part containing 59 acres more or less, NE¼, SE¼ part containing 61 acres more or less, SW¼ part containing 16 acres more or less

Section 27: W½NW¼ part containing 3 acres more or less

(the "Big Horn Coal Co. Surface Lands" Exhibit 1 to Attachment A)

EXHIBIT 1 TO ATTACHMENT A

(BIG HORN COAL CO. SURFACE LANDS)



K:\Sheridan\RAMACO\13139\EQC\Padlock SUA\BHC_DEQ_PERMISSION.dwg 10/11/2016 3:17:53 PM dave johnson

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Alan Edwards
To:	Todd Parfitt
Bcc:	Alan.edwards@wyo.gov
Subject:	Fwd: Draft Consent for DEQ Access
Date:	Tuesday, October 11, 2016 7:07:43 PM
Attachments:	CONSENT_TO_ACCESS_PRIVATE_PROPERTY_BHC_WDEQ_v2.pdf

---

Brook Mine has no objection to Lynne's change. I would like to discuss with you tomorrow but I think we are good on the access with Big Horn.

Alan

Sent from my iPhone

Begin forwarded message:

> **From:** Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>
> **Date:** October 11, 2016 at 4:35:24 PM MDT
> **To:** BJ Kristiansen <bj.kristiansen@wyo.gov>
> **Cc:** Alan Edwards <alan.edwards@wyo.gov>, Mark Rogaczewski <mark.rogaczewski@wyo.gov>
> **Subject: Fwd: Draft Consent for DEQ Access**
>
> **Privileged & Confidential**
> **Attorney-Client Communication**
>
> BJ,
>
> Regarding my previous request, Brook attached an amended property description that probably matches up better with the permit. However, could you take a look to make sure that's the case?
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue ***Please note the new mailing address**
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly

prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

---------- Forwarded message ----------
From: **Jeffrey S. Pope** <JSPope@hollandhart.com>
Date: Tue, Oct 11, 2016 at 4:11 PM
Subject: RE: Draft Consent for DEQ Access
To: James Kaste <james.kaste@wyo.gov>, Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>, Thomas Sansonetti <TLSansonetti@hollandhart.com>, "Michael Klein (m.klein@lhr-inc.com)" <m.klein@lhr-inc.com>

James,

Brook has no objection to Lynne's changes. I have also attached the correct land description that Lynne requested.

Thanks,

Jeff

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

ATTACHMENT A

[Description of Big Horn Coal Co. lands within current Brook Mine Permit area]

Township 57 North, Range 84 West, 6th P.M., Sheridan County, WY

Section 9: SW¼NW¼, SW¼, SE¼ part containing 159 acres more or less, SW¼NE¼ part containing 36 acres more or less, SE¼NE¼ part containing 8 acres more or less, NW¼NE¼ part containing 5 acres more or less

Section 10: SW¼ part containing 73 acres more or less

Section 15: NW¼, W½NE¼ part containing 42 acres more or less, SE¼ part containing 88 acres more or less, SE¼SW¼ part containing 4 acres more or less

Section 21: NE¼ part containing 36 acres more or less, NW¼ part containing 5 acres more or less

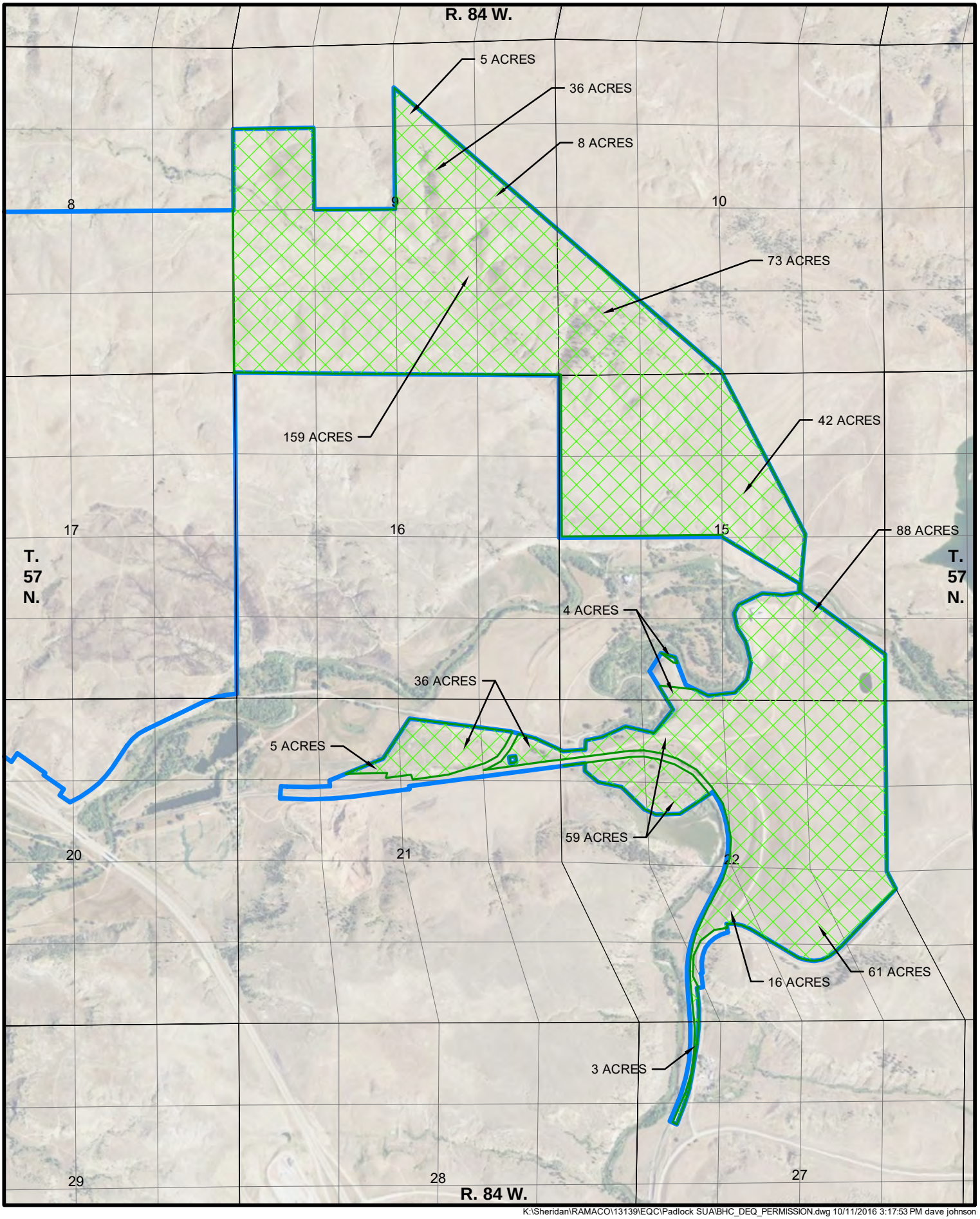
Section 22: NW¼ part containing 59 acres more or less, NE¼, SE¼ part containing 61 acres more or less, SW¼ part containing 16 acres more or less

Section 27: W½NW¼ part containing 3 acres more or less

(the "Big Horn Coal Co. Surface Lands" Exhibit 1 to Attachment A)

EXHIBIT 1 TO ATTACHMENT A

(BIG HORN COAL CO. SURFACE LANDS)



K:\Sheridan\RAMACO\13139\EQC\Padlock SUA\BHC_DEQ_PERMISSION.dwg 10/11/2016 3:17:53 PM dave johnson

From:	BJ Kristiansen
To:	Alan Edwards
Cc:	andrew kuhlmann; Mark Rogaczewski
Subject:	Re: Form 8
Date:	Wednesday, October 12, 2016 10:48:16 AM
Attachments:	coal_Surface-Owner-Consent-Form-8.pdf Laya Form 8.pdf Taylor Form 8.pdf

---

Alan,

I attached our current Form 8 as well as the Form 8 from the Laya and Taylor acreages. The Laya Form 8 is the older version and will be updated this week with a new version. The Taylor Form 8 is up-to-date. We will be receiving a new Form 8 from Padlock as well as the Big Horn Coal access approval to perform our inspections on Brook Mine. The last piece will be the Order in Lieu of Consent when it is published. All of these items will exist together in the Volume I Adjudication document so that we will be able to access them all in the same place in the permit.

-bj

On Wed, Oct 12, 2016 at 9:30 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> Please send me a copy of the Form 8 that we have applicants use. I would also like to know if the form that Brook was circulating was different than the standard form. Alan
>
> Sent from my iPhone
> --
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Security settings or invalid file format do not permit using coal_Surface-Owner-Consent-Form-8.pdf (127364 Bytes).

SURFACE LANDOWNER'S CONSENT

I, Joyce J. Laya, CERTIFY that I hold surface rights on the following lands on which See Attachment A holds mineral estate rights:

See Attachment B	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.
	Section		, T.		N.,R.		W.

County of Sheridan.

I have examined the mining plans and reclamation plan prepared by RAMACO WYOMING, LLC in compliance with the Wyoming ENVIRONMENTAL QUALITY ACT, and do hereby approve said plans, and give my consent to enter and carry out said mining and reclamation programs on said lands as proposed therein.

Dated this 21 day of Aug, 20 14.

Trustees of the William J. Laya and Joyce J. Laya, William J. Laya Trust Under Trust Agreement Dated November 19, 1993

Joyce J. Laya
Surface Landowner (Signature)

8-21-2014
Date

Joyce J. Laya
Name (printed or typed)

8/21/2014
(Witness) (Date)

Form 8
Rev. 10/99

SURFACE LANDOWNER'S CONSENT

I, Leroy Taylor, CERTIFY that I hold surface access rights on the following lands on which See Attachment A holds mineral estate rights:

See Attachment B Section _____, T. _____ N., R. _____ W.

_____ Section _____, T. _____ N., R. _____ W.

_____ Section _____, T. _____ N., R. _____ W.

_____ Section _____, T. _____ N., R. _____ W.

_____ Section _____, T. _____ N., R. _____ W.

_____ Section _____, T. _____ N., R. _____ W.

_____ Section _____, T. _____ N., R. _____ W.

County of Sheridan.

I have examined the mining and reclamation plans, prepared by Ramaco Wy. Coal Co., LLC, in compliance with the Wyoming ENVIRONMENTAL QUALITY ACT, and do hereby approve said plans, and give my consent to enter and carry out said mining and reclamation programs on said lands as proposed therein. I do hereby also grant unrestricted access to the mine site to the Department of Environmental Quality, Land Quality Division to enter and carry out mine inspections on said lands during normal business hours.

Dated this 6 day of Oct, 2014.

TAYLOR INVESTMENTS / LeRoy D. Taylor
Surface Landowner (Signature)

Leroy Taylor
Name (printed or typed)

Niles Veal 10-6-14
Witness (Signature) (Date)

Niles Veal
Witness Name (printed or typed)

Form 8 – Surface Owner Consent Form
Revised 6_2013

Land Quality Division

From:	Lynne Boomgaarden
To:	James Kaste; Jeffrey S. Pope
Cc:	Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; j.sweeney@lhr-inc.com; Michael Klein (m.klein@lhr-inc.com)
Subject:	RE: Draft Consent for DEQ Access
Date:	Tuesday, October 18, 2016 9:33:21 AM
Attachments:	image001.jpg

James, Jeff –
Jordan Sweeney will be sending BJ the signed consent for DEQ Access today, with a copy to Jeff for Brook Mine.
Regards,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Thursday, October 13, 2016 11:06 AM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Isaac Sutphin

<INSutphin@hollandhart.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>; Thomas Sansonetti <TLSansonetti@hollandhart.com>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Either way works for me, so if that works for Lynne, I have no objection.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Thu, Oct 13, 2016 at 10:53 AM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> One procedural note for Brook. We will need to submit the Big Horn consent document to DEQ as part of our Round 6 comment responses. So we would ask that when Big Horn executes the consent form, it send that to Brook. I realize that under the procedure you have proposed DEQ would get the consent. But as we understand DEQ's internal processes, submittal directly to DEQ could make processing the Round 6 comment responses more difficult. So to keep the process moving smoothly, we would ask that Lynne send us the signed consent directly.
>
> Finally, for our planning purposes, is there a timetable on when Big Horn will execute the consent?
>
> Thanks,
>
> Jeff
>
> **From:** James Kaste [mailto:james.kaste@wyo.gov]

Sent: Wednesday, October 12, 2016 9:31 AM
To: Lynne Boomgaarden
Cc: Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Jeffrey S. Pope
Subject: Re: Draft Consent for DEQ Access

Lynne,

Your revisions to the consent work for DEQ and the revised legal description Jeff sent yesterday works too. Accordingly, if your client could execute the revised consent with the corrected legal description and submit it to BJ Kristiansen in the Sheridan Office, I think this particular issue will be fully resolved. Alternatively, you can send it to me and I can make sure it gets to BJ.

Thank you very much for your help with this matter. I really appreciate the cooperative effort of everyone involved.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 4:11 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:
James,

Brook has no objection to Lynne's changes. I have also attached the correct land description that Lynne requested.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Tuesday, October 11, 2016 2:17 PM
To: Lynne Boomgaarden
Cc: Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Michael Klein (m.klein@lhr-inc.com); Jeffrey S. Pope

Subject: Re: Draft Consent for DEQ Access

Lynne,

Thank you. Let me check in with the folks at DEQ and make sure they don't have any concerns and I'll get back to you by tomorrow.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 1:55 PM, Lynne Boomgaarden <lboomgaarden@crowleyfleck.com> wrote:

James –
I have attached for your consideration a red-line and clean version of the Draft Consent to include Big Horn Coal Company's proposed edits. Please note that I made a few additional non-substantive edits on the clean version. I have also attached a copy of the Form 8 that Padlock Ranch signed as provided to me by Mr. Sansonetti. Finally, I have attached a copy of the Attachment A that Mr. Pope provided with notes from Big Horn Coal. As you can see on the attached Attachment A there is one acreage discrepancy that should be clarified. Also, I request that any reference to PKS Co. be deleted from Attachment A, as Big Horn Coal is the only party to the order in lieu of consent proceedings (in any event the correct reference would be to KCP Properties Inc., not PKS). I suggest that the Map labeled as Exhibit B, be re-labeled as Exhibit 1 to Attachment A, for clarification purposes.

Please let me know if you have questions or concerns or would like to discuss this further.
Best regards,
Lynne

Lynne Boomgaarden

Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast.
For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 4:34 PM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>; Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Thank you. I will look forward to Lynne's comments next week.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue

Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Fri, Oct 7, 2016 at 3:28 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> The Brook team has reviewed the document you put together. We have one small proposed change based on how DEQ phrased its Round 6 comments. As noted in the attached reline, DEQ has required access before it will issue a permit. So we do not think that access can be contingent on the permit. Otherwise, a loop is created about whether DEQ could not issue the permit.
>
> The proposed change should not affect Big Horn's right to appeal or waive any arguments.
>
> We have also taken the liberty of preparing a land description to include as an attachment to the document. I have attached that for everyone's review.
>
> Thanks,
>
> Jeff
>
> **From:** James Kaste [mailto:james.kaste@wyo.gov]
> **Sent:** Friday, October 07, 2016 11:01 AM
> **To:** Jeffrey S. Pope; Isaac Sutphin; lboomgaarden@crowleyfleck.com
> **Cc:** Andrew Kuhlmann; Alan Edwards
> **Subject:** Draft Consent for DEQ Access
>
> Lynne, Jeff and Isaac,
>
> Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.
>
> Thanks,
>
> James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	James Kaste
To:	Lynne Boomgaarden
Cc:	Jeffrey S. Pope; Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; j.sweeney@lhr-inc.com; Michael Klein (m.klein@lhr-inc.com)
Subject:	Re: Draft Consent for DEQ Access
Date:	Tuesday, October 18, 2016 9:35:14 AM
Attachments:	image001.jpg

Lynne,

Thank you, and thanks for all your help with this matter.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 18, 2016 at 9:33 AM, Lynne Boomgaarden <lboomgaarden@crowleyfleck.com> wrote:

> James, Jeff –
>
> Jordan Sweeney will be sending BJ the signed consent for DEQ Access today, with a copy to Jeff for Brook Mine.
>
> Regards,
>
> Lynne
>
> *Lynne Boomgaarden*

Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Thursday, October 13, 2016 11:06 AM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Isaac Sutphin <INSutphin@hollandhart.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>; Thomas Sansonetti <TLSansonetti@hollandhart.com>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Either way works for me, so if that works for Lynne, I have no objection.

James.

James C. Kaste

Deputy Attorney General

Water & Natural Resources Division

2320 Capitol Avenue

Cheyenne, WY 82002

(307) 777-6946 phone

(307) 777-3542 fax

james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Thu, Oct 13, 2016 at 10:53 AM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> One procedural note for Brook. We will need to submit the Big Horn consent document to DEQ as part of our Round 6 comment responses. So we would ask that when Big Horn executes the consent form, it send that to Brook. I realize that under the procedure you have proposed DEQ would get the consent. But as we understand DEQ's internal processes, submittal directly to DEQ could make processing the Round 6 comment responses more difficult. So to keep the process moving smoothly, we would ask that Lynne send us the signed consent directly.
>
> Finally, for our planning purposes, is there a timetable on when Big Horn will execute the consent?
>
> Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Wednesday, October 12, 2016 9:31 AM
To: Lynne Boomgaarden
Cc: Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Jeffrey S. Pope
Subject: Re: Draft Consent for DEQ Access

Lynne,

Your revisions to the consent work for DEQ and the revised legal description Jeff sent yesterday works too. Accordingly, if your client could execute the revised consent with the corrected legal description and submit it to BJ Kristiansen in the Sheridan Office, I think this particular issue will be fully resolved. Alternatively, you can send it to me and I can make sure it gets to BJ.

Thank you very much for your help with this matter. I really appreciate the cooperative effort of everyone involved.

James.

James C. Kaste

Deputy Attorney General

Water & Natural Resources Division

2320 Capitol Avenue

Cheyenne, WY 82002

(307) 777-6946 phone

(307) 777-3542 fax

james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 4:11 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

James,

Brook has no objection to Lynne's changes. I have also attached the correct land description that Lynne requested.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Tuesday, October 11, 2016 2:17 PM
To: Lynne Boomgaarden
Cc: Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Michael Klein (m.klein@lhr-inc.com); Jeffrey S. Pope
Subject: Re: Draft Consent for DEQ Access

Lynne,

Thank you. Let me check in with the folks at DEQ and make sure they don't have any concerns and I'll get back to you by tomorrow.

James.

James C. Kaste

Deputy Attorney General

Water & Natural Resources Division

2320 Capitol Avenue

Cheyenne, WY 82002

(307) 777-6946 phone

(307) 777-3542 fax

james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 1:55 PM, Lynne Boomgaarden <lboomgaarden@crowleyfleck.com> wrote:

James –

I have attached for your consideration a red-line and clean version of the Draft Consent to include Big Horn Coal Company's proposed edits. Please note that I made a few additional non-substantive edits on the clean version. I have also attached a copy of the Form 8 that Padlock Ranch signed as provided to me by Mr. Sansonetti. Finally, I have attached a copy of the Attachment A that Mr. Pope provided with notes from Big Horn Coal. As you can see on the attached Attachment A there is one acreage discrepancy that should be clarified. Also, I request that any reference to PKS Co. be deleted from Attachment A, as Big Horn Coal is the only party to the order in lieu of consent proceedings (in any event the correct reference would be to KCP Properties Inc., not PKS). I suggest that the Map labeled as Exhibit B, be re-labeled as Exhibit 1 to Attachment A, for clarification purposes.

Please let me know if you have questions or concerns or would like to discuss this further.

Best regards,

Lynne

Lynne Boomgaarden

Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 4:34 PM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>; Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Thank you. I will look forward to Lynne's comments next week.

James.

James C. Kaste

Deputy Attorney General

Water & Natural Resources Division

2320 Capitol Avenue

Cheyenne, WY 82002

(307) 777-6946 phone

(307) 777-3542 fax

james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Fri, Oct 7, 2016 at 3:28 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> The Brook team has reviewed the document you put together. We have one small proposed change based on how DEQ phrased its Round 6 comments. As noted in the attached reline, DEQ has required access before it will issue a permit. So we do not think that access can be contingent on the permit. Otherwise, a loop is created about whether DEQ could not issue the permit.
>
> The proposed change should not affect Big Horn's right to appeal or waive any arguments.

We have also taken the liberty of preparing a land description to include as an attachment to the document. I have attached that for everyone's review.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 11:01 AM
To: Jeffrey S. Pope; Isaac Sutphin; lboomgaarden@crowleyfleck.com
Cc: Andrew Kuhlmann; Alan Edwards
Subject: Draft Consent for DEQ Access

Lynne, Jeff and Isaac,

Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.

Thanks,

James.

James C. Kaste

Deputy Attorney General

Water & Natural Resources Division

2320 Capitol Avenue

Cheyenne, WY 82002

(307) 777-6946 phone

(307) 777-3542 fax

james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Lynne Boomgaarden
To:	James Kaste
Cc:	Jeffrey S. Pope; Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; j.sweeney@lhr-inc.com; Michael Klein (m.klein@lhr-inc.com)
Subject:	RE: Draft Consent for DEQ Access
Date:	Tuesday, October 18, 2016 9:38:53 AM
Attachments:	image001.jpg

James,
You are very welcome. I'm glad it could be resolved efficiently between DEQ and Big Horn Coal.
Regards,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Tuesday, October 18, 2016 9:35 AM
To: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>
Cc: Jeffrey S. Pope <JSPope@hollandhart.com>; Isaac Sutphin <INSutphin@hollandhart.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>;

Thomas Sansonetti <TLSansonetti@hollandhart.com>; j.sweeney@lhr-inc.com; Michael Klein (m.klein@lhr-inc.com) <m.klein@lhr-inc.com>
Subject: Re: Draft Consent for DEQ Access

Lynne,

Thank you, and thanks for all your help with this matter.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 18, 2016 at 9:33 AM, Lynne Boomgaarden <lboomgaarden@crowleyfleck.com> wrote:

> James, Jeff –
> Jordan Sweeney will be sending BJ the signed consent for DEQ Access today, with a copy to Jeff for Brook Mine.
> Regards,
> Lynne
>
> *Lynne Boomgaarden*
> Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast.
For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Thursday, October 13, 2016 11:06 AM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Isaac Sutphin <INSutphin@hollandhart.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>; Thomas Sansonetti <TLSansonetti@hollandhart.com>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Either way works for me, so if that works for Lynne, I have no objection.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Thu, Oct 13, 2016 at 10:53 AM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

Hi James,

One procedural note for Brook. We will need to submit the Big Horn consent document to DEQ as part of our Round 6 comment responses. So we would ask that when Big Horn executes the consent form, it send that to Brook. I realize that under the procedure you have proposed DEQ would get the consent. But as we understand DEQ's internal processes, submittal directly to DEQ could make processing the Round 6 comment responses more difficult. So to keep the process moving smoothly, we would ask that Lynne send us the signed consent directly.

Finally, for our planning purposes, is there a timetable on when Big Horn will execute the consent?

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Wednesday, October 12, 2016 9:31 AM
To: Lynne Boomgaarden
Cc: Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Jeffrey S. Pope
Subject: Re: Draft Consent for DEQ Access

Lynne,

Your revisions to the consent work for DEQ and the revised legal description Jeff sent yesterday works too. Accordingly, if your client could execute the revised consent with the corrected legal description and submit it to BJ Kristiansen in the Sheridan Office, I think this particular issue will be fully resolved. Alternatively, you can send it to me and I can make sure it gets to BJ.

Thank you very much for your help with this matter. I really appreciate the cooperative effort of everyone involved.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 4:11 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

James,

Brook has no objection to Lynne's changes. I have also attached the correct land description that Lynne requested.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Tuesday, October 11, 2016 2:17 PM
To: Lynne Boomgaarden
Cc: Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Michael Klein (m.klein@lhr-inc.com); Jeffrey S. Pope
Subject: Re: Draft Consent for DEQ Access

Lynne,

Thank you. Let me check in with the folks at DEQ and make sure they don't have any concerns and I'll get back to you by tomorrow.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 1:55 PM, Lynne Boomgaarden <lboomgaarden@crowleyfleck.com> wrote:

James –
I have attached for your consideration a red-line and clean version of the Draft Consent to include Big Horn Coal Company's proposed edits. Please note that I made a few additional non-substantive edits on the clean version. I have also attached a copy of the Form 8 that Padlock Ranch signed as provided to me by Mr. Sansonetti. Finally, I have attached a copy of the Attachment A that Mr. Pope provided with notes from Big Horn Coal. As you can see on the attached Attachment A there is one acreage discrepancy that should be clarified. Also, I request that any reference to PKS Co. be deleted from Attachment A, as Big Horn Coal is the only party to the order in lieu of consent proceedings (in any event the correct reference would be to KCP Properties Inc., not PKS). I suggest that the Map labeled as Exhibit B, be re-labeled as Exhibit 1 to Attachment A, for clarification purposes.

Please let me know if you have questions or concerns or would like to discuss this further.
Best regards,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast.

For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 4:34 PM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>; Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Thank you. I will look forward to Lynne's comments next week.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Fri, Oct 7, 2016 at 3:28 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> The Brook team has reviewed the document you put together. We have one small proposed change based on how DEQ phrased its Round 6 comments. As noted in the attached reline, DEQ has required access before it will issue a permit. So we do not think that access can be contingent on the permit. Otherwise, a loop is created about whether DEQ could not issue the permit.
>
> The proposed change should not affect Big Horn's right to appeal or waive any arguments.
>
> We have also taken the liberty of preparing a land description to include as an attachment to the document. I have attached that for everyone's review.
>
> Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 11:01 AM
To: Jeffrey S. Pope; Isaac Sutphin; lboomgaarden@crowleyfleck.com
Cc: Andrew Kuhlmann; Alan Edwards
Subject: Draft Consent for DEQ Access

Lynne, Jeff and Isaac,

Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.

Thanks,

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Jordan Sweeney
To:	Lynne Boomgaarden; James Kaste; Jeffrey S. Pope
Cc:	Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Michael Klein
Subject:	Consent for DEQ Access
Date:	Tuesday, October 18, 2016 1:58:54 PM
Attachments:	CONSENT_TO_ACCESS_PRIVATE_PROPERTY_BHC_WDEQ_Signed.pdf image002.jpg image003.jpg

---

All,

Please find the attached, executed agreement on behalf of Big Horn Coal Company, I will be sending the original to BJ this afternoon.

Thank You,

Jordan

cid:image002.jpg@01D0737D.EE1A4670

Jordan Sweeney, Corporate Environmental Manager
O 801.539.3820 | **M** 801.712.7571 | lighthouseresourcesinc.com
10980 South Jordan Gateway | South Jordan, UT 84095

We have moved to a new office. Please make note of my new address.

From: Lynne Boomgaarden [mailto:lboomgaarden@crowleyfleck.com]
Sent: Tuesday, October 18, 2016 9:33 AM
To: James Kaste <james.kaste@wyo.gov>; Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>; Thomas Sansonetti <TLSansonetti@hollandhart.com>; Jordan Sweeney <j.sweeney@lhr-inc.com>; Michael Klein <m.klein@lhr-inc.com>
Subject: RE: Draft Consent for DEQ Access

James, Jeff –
Jordan Sweeney will be sending BJ the signed consent for DEQ Access today, with a copy to Jeff for Brook Mine.
Regards,
Lynne

Lynne Boomgaarden

Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Thursday, October 13, 2016 11:06 AM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Isaac Sutphin <INSutphin@hollandhart.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>; Thomas Sansonetti <TLSansonetti@hollandhart.com>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Either way works for me, so if that works for Lynne, I have no objection.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002

(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Thu, Oct 13, 2016 at 10:53 AM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> One procedural note for Brook. We will need to submit the Big Horn consent document to DEQ as part of our Round 6 comment responses. So we would ask that when Big Horn executes the consent form, it send that to Brook. I realize that under the procedure you have proposed DEQ would get the consent. But as we understand DEQ's internal processes, submittal directly to DEQ could make processing the Round 6 comment responses more difficult. So to keep the process moving smoothly, we would ask that Lynne send us the signed consent directly.
>
> Finally, for our planning purposes, is there a timetable on when Big Horn will execute the consent?
>
> Thanks,
>
> Jeff
>
> **From:** James Kaste [mailto:james.kaste@wyo.gov]
> **Sent:** Wednesday, October 12, 2016 9:31 AM
> **To:** Lynne Boomgaarden
> **Cc:** Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Jeffrey S. Pope
> **Subject:** Re: Draft Consent for DEQ Access
>
> Lynne,
>
> Your revisions to the consent work for DEQ and the revised legal description Jeff sent yesterday works too. Accordingly, if your client could execute the revised consent with the corrected legal description and submit it to BJ Kristiansen in the Sheridan Office, I think this particular issue will be fully resolved. Alternatively, you can send it to me and I can make sure it gets to BJ.
>
> Thank you very much for your help with this matter. I really appreciate the cooperative effort of everyone involved.
>
> James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 4:11 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

James,

Brook has no objection to Lynne's changes. I have also attached the correct land description that Lynne requested.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Tuesday, October 11, 2016 2:17 PM
To: Lynne Boomgaarden
Cc: Isaac Sutphin; Andrew Kuhlmann; Alan Edwards; Thomas Sansonetti; Michael Klein (m.klein@lhr-inc.com); Jeffrey S. Pope
Subject: Re: Draft Consent for DEQ Access

Lynne,

Thank you. Let me check in with the folks at DEQ and make sure they don't have any concerns and I'll get back to you by tomorrow.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax

james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Tue, Oct 11, 2016 at 1:55 PM, Lynne Boomgaarden <lboomgaarden@crowleyfleck.com> wrote:

James –
I have attached for your consideration a red-line and clean version of the Draft Consent to include Big Horn Coal Company's proposed edits. Please note that I made a few additional non-substantive edits on the clean version. I have also attached a copy of the Form 8 that Padlock Ranch signed as provided to me by Mr. Sansonetti. Finally, I have attached a copy of the Attachment A that Mr. Pope provided with notes from Big Horn Coal. As you can see on the attached Attachment A there is one acreage discrepancy that should be clarified. Also, I request that any reference to PKS Co. be deleted from Attachment A, as Big Horn Coal is the only party to the order in lieu of consent proceedings (in any event the correct reference would be to KCP Properties Inc., not PKS). I suggest that the Map labeled as Exhibit B, be re-labeled as Exhibit 1 to Attachment A, for clarification purposes.

Please let me know if you have questions or concerns or would like to discuss this further.
Best regards,
Lynne

Lynne Boomgaarden
Lynne Boomgaarden

Notice: This electronic mail transmission may constitute an attorney-client communication that is privileged at law. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this electronic mail transmission in error, please delete it from your system without copying it, and notify the sender by reply e-mail or by calling Crowley Fleck PLLP, so that our address record can be corrected.

NOTICE: THIS ELECTRONIC MAIL TRANSMISSION MAY CONSTITUTE AN ATTORNEY-CLIENT COMMUNICATION THAT IS PRIVILEGED AT LAW. IT IS NOT INTENDED FOR TRANSMISSION TO, OR RECEIPT BY, ANY UNAUTHORIZED PERSONS. IF YOU HAVE RECEIVED THIS ELECTRONIC MAIL TRANSMISSION IN ERROR, PLEASE DELETE IT FROM YOUR SYSTEM WITHOUT COPYING IT, AND NOTIFY THE SENDER BY REPLY E-MAIL OR BY CALLING CROWLEY FLECK PLLP AT 406-252-3441, SO THAT OUR ADDRESS RECORD CAN BE CORRECTED.

This email has been scanned for email related threats and delivered safely by Mimecast.
For more information please visit http://www.mimecast.com

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 4:34 PM
To: Jeffrey S. Pope <JSPope@hollandhart.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>; Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>; Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>; Alan Edwards <alan.edwards@wyo.gov>
Subject: Re: Draft Consent for DEQ Access

Jeff,

Thank you. I will look forward to Lynne's comments next week.

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

On Fri, Oct 7, 2016 at 3:28 PM, Jeffrey S. Pope <JSPope@hollandhart.com> wrote:

> Hi James,
>
> The Brook team has reviewed the document you put together. We have one small proposed change based on how DEQ phrased its Round 6 comments. As noted in the attached reline, DEQ has required access before it will issue a permit. So we do not think that access can be

contingent on the permit. Otherwise, a loop is created about whether DEQ could not issue the permit.

The proposed change should not affect Big Horn's right to appeal or waive any arguments.

We have also taken the liberty of preparing a land description to include as an attachment to the document. I have attached that for everyone's review.

Thanks,

Jeff

From: James Kaste [mailto:james.kaste@wyo.gov]
Sent: Friday, October 07, 2016 11:01 AM
To: Jeffrey S. Pope; Isaac Sutphin; lboomgaarden@crowleyfleck.com
Cc: Andrew Kuhlmann; Alan Edwards
Subject: Draft Consent for DEQ Access

Lynne, Jeff and Isaac,

Thank you all for your time today. As we discussed, I have put together a surface owner's consent form that I hope meets everyone's needs. I think this language should grant DEQ the access it needs, while ensuring that execution of the consent does not affect the EQC proceedings. Please let me know whether this will work for your clients, or if you have any suggestions for revision.

Thanks,

James.

James C. Kaste
Deputy Attorney General
Water & Natural Resources Division
2320 Capitol Avenue
Cheyenne, WY 82002
(307) 777-6946 phone
(307) 777-3542 fax
james.kaste@wyo.gov

*The information provided in this communication is confidential and protected, may be attorney client privileged, may constitute inside information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately at (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

> Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

IMPORTANT NOTICE: Information in this message (and any attachments) is confidential, may be legally privileged and is intended for use only by the addressee(s). The sender did not intend to waive any privilege by sending this message. If you are not the intended recipient of this message, please delete the email, destroy all copies and contact the sender immediately. Any disclosure, distribution or use of the information by unintended recipients is prohibited and may be unlawful. We do not represent, warrant or guarantee that this message is free of viruses.

SURFACE LAND OWNER'S CONSENT

Big Horn Coal Company, LLC (Surface Land Owner) CERTIFIES that it is the surface owner of the following described property on which Brook Mining Company, LLC (Applicant) proposes to operate or property which must be crossed to access Applicant's operations as proposed in Applicant's mining and reclamation plans:

As described in the attached Attachment A, incorporated herein

Land Owner and Applicant are parties to an action pending before the Wyoming Environmental Quality Council entitled *In Re Brook Mine Application*, Civil Action No. 16-1601. Without waiving any rights which Land Owner may have in that action or any subsequent appeal, Land Owner hereby grants access to the above described property to the Department of Environmental Quality, Land Quality Division, to enter and carry out mine inspections related to Applicant's permitted operations. Such entry and inspections shall be conducted during normal business hours and in compliance with all applicable federal, state and local laws, permit conditions, and mining industry safety practices. Nothing in this consent should be construed as consent by Land Owner to Applicant's mining and reclamation plans or consent to enter and carry out those mining and reclamation programs on said lands except as may be ordered by the Wyoming Environmental Quality Council or a court of competent jurisdiction.

Dated this 18 day of October, 2016.

Surface Land Owner (Signature)

JORDAN SWEENEY

Name (printed or typed)

STATE OF UTAH)
) **ss.**
COUNTY OF SALT LAKE)

Subscribed and sworn to before me by Jordan Sweeney this 18 day of October, 2016.

Witness my hand and official seal.

SEAL

MICHAEL O'ROURKE
NOTARY PUBLIC -STATE OF UTAH
My Comm. Exp 07/18/2020
Commission # 689968

Notary Public

My Commission expires _____

ATTACHMENT A

[Description of Big Horn Coal Co. lands within current Brook Mine Permit area]

Township 57 North, Range 84 West, 6th P.M., Sheridan County, WY

Section 9: SW¼NW¼, SW¼, SE¼ part containing 159 acres more or less, SW¼NE¼ part containing 36 acres more or less, SE¼NE¼ part containing 8 acres more or less, NW¼NE¼ part containing 5 acres more or less

Section 10: SW¼ part containing 73 acres more or less

Section 15: NW¼, W½NE¼ part containing 42 acres more or less, SE¼ part containing 88 acres more or less, SE¼SW¼ part containing 4 acres more or less

Section 21: NE¼ part containing 36 acres more or less, NW¼ part containing 5 acres more or less

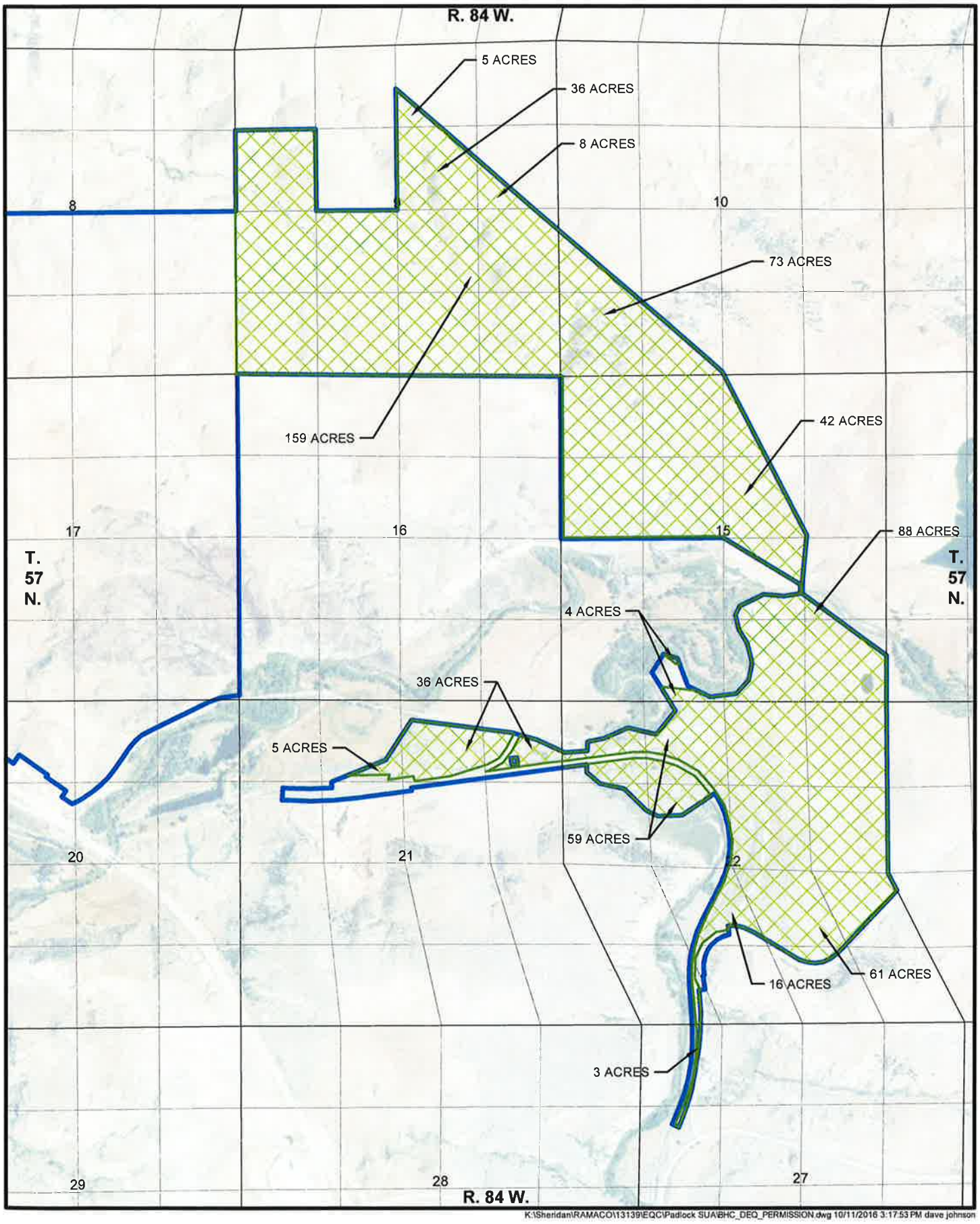
Section 22: NW¼ part containing 59 acres more or less, NE¼, SE¼ part containing 61 acres more or less, SW¼ part containing 16 acres more or less

Section 27: W½NW¼ part containing 3 acres more or less

(the "Big Horn Coal Co. Surface Lands" Exhibit 1 to Attachment A)

EXHIBIT 1 TO ATTACHMENT A

(BIG HORN COAL CO. SURFACE LANDS)



K:\Sheridan\RAMACO\13139\EQC\Padlock SUA\BHC_DEQ_PERMISSION.dwg 10/11/2016 3:17:53 PM dave johnson

Lighthouse
RESOURCES INC

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

From:	Alan Edwards
To:	Todd Parfitt
Bcc:	Alan.edwards@wyo.gov
Subject:	Fwd: Consent for DEQ Access
Date:	Tuesday, October 18, 2016 2:01:30 PM
Attachments:	image002.jpg image003.jpg image003.jpg CONSENT_TO_ACCESS_PRIVATE_PROPERTY_BHC_WDEQ_Signed.pdf

---

FYI. Big Horn access signed. Alan

Sent from my iPhone

Begin forwarded message:

> **From:** Jordan Sweeney <j.sweeney@lhr-inc.com>
> **Date:** October 18, 2016 at 1:58:12 PM MDT
> **To:** Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>, James Kaste <james.kaste@wyo.gov>, "Jeffrey S. Pope" <JSPope@hollandhart.com>
> **Cc:** Isaac Sutphin <INSutphin@hollandhart.com>, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>, "Thomas Sansonetti" <TLSansonetti@hollandhart.com>, Michael Klein <m.klein@lhr-inc.com>
> **Subject: Consent for DEQ Access**
>
> All,
>
> Please find the attached, executed agreement on behalf of Big Horn Coal Company, I will be sending the original to BJ this afternoon.
>
> Thank You,
>
> Jordan

Lighthouse
RESOURCES INC

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

Lynne Boomgaarden
Crowley Fleck PLLP
Attorney at Law

(307) 426-4104 Work
(307) 631-1070 Mobile
lboomgaarden@crowleyfleck.com
237 Storey Boulevard, Suite 110
Cheyenne, WY 82009
www.crowleyfleck.com

SURFACE LAND OWNER'S CONSENT

Big Horn Coal Company, LLC (Surface Land Owner) CERTIFIES that it is the surface owner of the following described property on which Brook Mining Company, LLC (Applicant) proposes to operate or property which must be crossed to access Applicant's operations as proposed in Applicant's mining and reclamation plans:

As described in the attached Attachment A, incorporated herein

Land Owner and Applicant are parties to an action pending before the Wyoming Environmental Quality Council entitled *In Re Brook Mine Application*, Civil Action No. 16-1601. Without waiving any rights which Land Owner may have in that action or any subsequent appeal, Land Owner hereby grants access to the above described property to the Department of Environmental Quality, Land Quality Division, to enter and carry out mine inspections related to Applicant's permitted operations. Such entry and inspections shall be conducted during normal business hours and in compliance with all applicable federal, state and local laws, permit conditions, and mining industry safety practices. Nothing in this consent should be construed as consent by Land Owner to Applicant's mining and reclamation plans or consent to enter and carry out those mining and reclamation programs on said lands except as may be ordered by the Wyoming Environmental Quality Council or a court of competent jurisdiction.

Dated this 18 day of October, 2016.

Surface Land Owner (Signature)

JORDAN SWEENEY

Name (printed or typed)

STATE OF UTAH)
) **ss.**
COUNTY OF SALT LAKE)

Subscribed and sworn to before me by Jordan Sweeney this 18 day of October, 2016.

Witness my hand and official seal.

SEAL

MICHAEL O'ROURKE
NOTARY PUBLIC -STATE OF UTAH
My Comm. Exp 07/18/2020
Commission # 689968

Notary Public

My Commission expires _____

ATTACHMENT A

[Description of Big Horn Coal Co. lands within current Brook Mine Permit area]

Township 57 North, Range 84 West, 6th P.M., Sheridan County, WY

Section 9: SW¼NW¼, SW¼, SE¼ part containing 159 acres more or less, SW¼NE¼ part containing 36 acres more or less, SE¼NE¼ part containing 8 acres more or less, NW¼NE¼ part containing 5 acres more or less

Section 10: SW¼ part containing 73 acres more or less

Section 15: NW¼, W½NE¼ part containing 42 acres more or less, SE¼ part containing 88 acres more or less, SE¼SW¼ part containing 4 acres more or less

Section 21: NE¼ part containing 36 acres more or less, NW¼ part containing 5 acres more or less

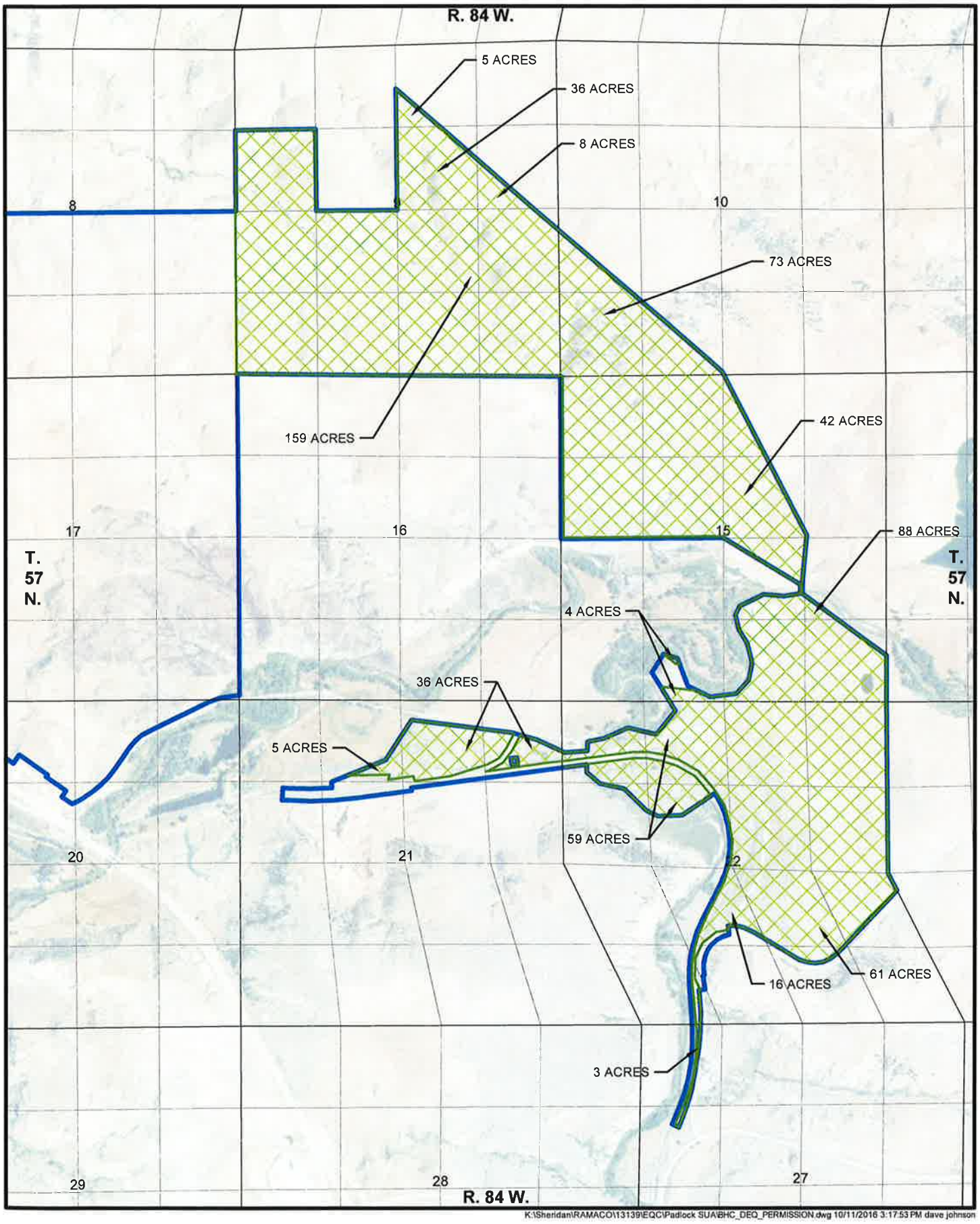
Section 22: NW¼ part containing 59 acres more or less, NE¼, SE¼ part containing 61 acres more or less, SW¼ part containing 16 acres more or less

Section 27: W½NW¼ part containing 3 acres more or less

(the "Big Horn Coal Co. Surface Lands" Exhibit 1 to Attachment A)

EXHIBIT 1 TO ATTACHMENT A

(BIG HORN COAL CO. SURFACE LANDS)



K:\Sheridan\RAMACO\13139\EQC\Padlock SUA\BHC_DEQ_PERMISSION.dwg 10/11/2016 3:17:53 PM dave johnson

From:	Andrew Kuhlmann
To:	BJ Kristiansen; Mark Rogaczewski
Cc:	Alan Edwards
Subject:	Fwd: Consent for DEQ Access
Date:	Tuesday, October 18, 2016 3:35:20 PM
Attachments:	CONSENT TO ACCESS PRIVATE PROPERTY_BHC_WDEQ_Signed.pdf image002.jpg

---

BJ and Mark,

Big Horn Coal gave us a heads up that they will be sending you the signed inspection access document for the Brook Mine today. From their message, I wasn't sure if they planned to get you an electronic copy too, so I thought I would forward you this one.

Thanks,
Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

---------- Forwarded message ----------
From: **Jordan Sweeney** <j.sweeney@lhr-inc.com>
Date: Tue, Oct 18, 2016 at 1:58 PM
Subject: Consent for DEQ Access
To: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>, James Kaste <james.kaste@wyo.gov>, "Jeffrey S. Pope" <JSPope@hollandhart.com>
Cc: Isaac Sutphin <INSutphin@hollandhart.com>, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>, Thomas Sansonetti <TLSansonetti@hollandhart.com>, Michael Klein <m.klein@lhr-inc.com>

All,

Please find the attached, executed agreement on behalf of Big Horn Coal Company, I will be sending

the original to BJ this afternoon.

Thank You,

Jordan

cid:image002.jpg@01D0737D.EE1A4670

Jordan Sweeney, Corporate Environmental Manager

O 801.539.3820 | **M** 801.712.7571 | lighthouseresourcesinc.com

10980 South Jordan Gateway | South Jordan, UT 84095

We have moved to a new office. Please make note of my new address.

SURFACE LAND OWNER'S CONSENT

Big Horn Coal Company, LLC (Surface Land Owner) CERTIFIES that it is the surface owner of the following described property on which Brook Mining Company, LLC (Applicant) proposes to operate or property which must be crossed to access Applicant's operations as proposed in Applicant's mining and reclamation plans:

As described in the attached Attachment A, incorporated herein

Land Owner and Applicant are parties to an action pending before the Wyoming Environmental Quality Council entitled *In Re Brook Mine Application*, Civil Action No. 16-1601. Without waiving any rights which Land Owner may have in that action or any subsequent appeal, Land Owner hereby grants access to the above described property to the Department of Environmental Quality, Land Quality Division, to enter and carry out mine inspections related to Applicant's permitted operations. Such entry and inspections shall be conducted during normal business hours and in compliance with all applicable federal, state and local laws, permit conditions, and mining industry safety practices. Nothing in this consent should be construed as consent by Land Owner to Applicant's mining and reclamation plans or consent to enter and carry out those mining and reclamation programs on said lands except as may be ordered by the Wyoming Environmental Quality Council or a court of competent jurisdiction.

Dated this 18 day of October, 2016.

Surface Land Owner (Signature)

JORDAN SWEENEY

Name (printed or typed)

STATE OF UTAH)
) **ss.**
COUNTY OF SALT LAKE)

Subscribed and sworn to before me by Jordan Sweeney this 18 day of October, 2016.

Witness my hand and official seal.

SEAL

MICHAEL O'ROURKE
NOTARY PUBLIC -STATE OF UTAH
My Comm. Exp 07/18/2020
Commission # 689968

Notary Public

My Commission expires _____

ATTACHMENT A

[Description of Big Horn Coal Co. lands within current Brook Mine Permit area]

Township 57 North, Range 84 West, 6th P.M., Sheridan County, WY

Section 9: SW¼NW¼, SW¼, SE¼ part containing 159 acres more or less, SW¼NE¼ part containing 36 acres more or less, SE¼NE¼ part containing 8 acres more or less, NW¼NE¼ part containing 5 acres more or less

Section 10: SW¼ part containing 73 acres more or less

Section 15: NW¼, W½NE¼ part containing 42 acres more or less, SE¼ part containing 88 acres more or less, SE¼SW¼ part containing 4 acres more or less

Section 21: NE¼ part containing 36 acres more or less, NW¼ part containing 5 acres more or less

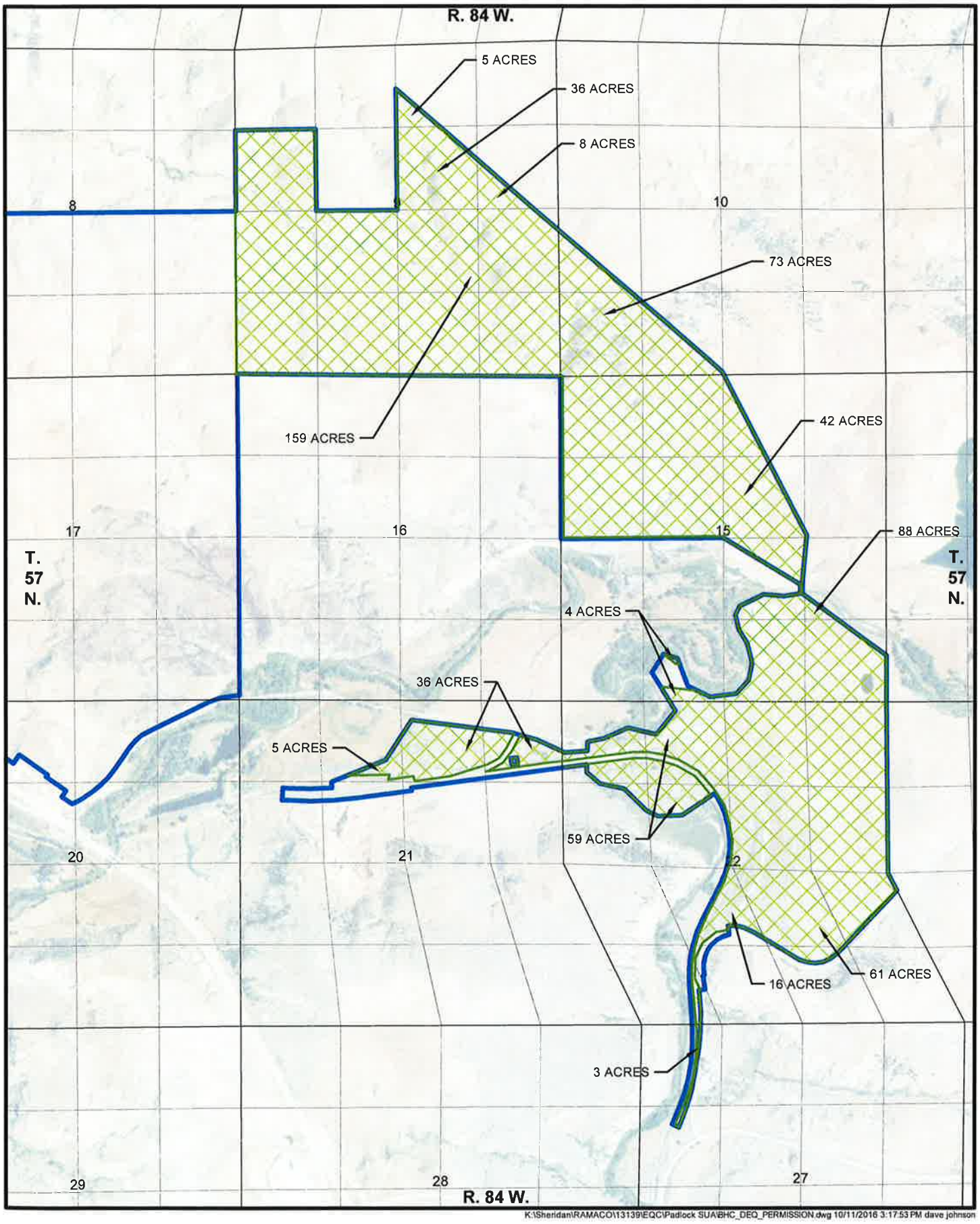
Section 22: NW¼ part containing 59 acres more or less, NE¼, SE¼ part containing 61 acres more or less, SW¼ part containing 16 acres more or less

Section 27: W½NW¼ part containing 3 acres more or less

(the "Big Horn Coal Co. Surface Lands" Exhibit 1 to Attachment A)

EXHIBIT 1 TO ATTACHMENT A

(BIG HORN COAL CO. SURFACE LANDS)



K:\Sheridan\RAMACO\13139\EQC\Padlock SUA\BHC_DEQ_PERMISSION.dwg 10/11/2016 3:17:53 PM dave johnson

Lighthouse
RESOURCES INC

From:	BJ Kristiansen
To:	Andrew Kuhlmann
Subject:	Re: Consent for DEQ Access
Date:	Tuesday, October 18, 2016 3:44:14 PM
Attachments:	image002.jpg

Andrew, they did send us a copy but thanks for your consideration.

On Tue, Oct 18, 2016 at 3:35 PM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> BJ and Mark,
>
> Big Horn Coal gave us a heads up that they will be sending you the signed inspection access document for the Brook Mine today. From their message, I wasn't sure if they planned to get you an electronic copy too, so I thought I would forward you this one.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue ***Please note the new mailing address**
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
> ---------- Forwarded message ----------
> From: **Jordan Sweeney** <j.sweeney@lhr-inc.com>
> Date: Tue, Oct 18, 2016 at 1:58 PM
> Subject: Consent for DEQ Access
> To: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>, James Kaste <james.kaste@wyo.gov>, "Jeffrey S. Pope" <JSPope@hollandhart.com>
> Cc: Isaac Sutphin <INSutphin@hollandhart.com>, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>, Thomas Sansonetti <TLSansonetti@hollandhart.com>, Michael Klein <m.klein@lhr-inc.com>
>
> All,

Please find the attached, executed agreement on behalf of Big Horn Coal Company, I will be sending the original to BJ this afternoon.

Thank You,

Jordan

cid:image002.jpg@01D0737D.EE1A4670

Jordan Sweeney, Corporate Environmental Manager

O 801.539.3820 | **M** 801.712.7571 | lighthouseresourcesinc.com

10980 South Jordan Gateway | South Jordan, UT 84095

We have moved to a new office. Please make note of my new address.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

Lighthouse
RESOURCES INC

From:	Mark Rogaczewski
To:	Andrew Kuhlmann
Cc:	BJ Kristiansen; Alan Edwards
Subject:	Re: Consent for DEQ Access
Date:	Wednesday, October 19, 2016 7:25:04 AM
Attachments:	image002.jpg

Thanks

On Tue, Oct 18, 2016 at 3:35 PM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> BJ and Mark,
>
> Big Horn Coal gave us a heads up that they will be sending you the signed inspection access document for the Brook Mine today. From their message, I wasn't sure if they planned to get you an electronic copy too, so I thought I would forward you this one.
>
> Thanks,
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
> ---------- Forwarded message ----------
> From: **Jordan Sweeney** <j.sweeney@lhr-inc.com>
> Date: Tue, Oct 18, 2016 at 1:58 PM
> Subject: Consent for DEQ Access
> To: Lynne Boomgaarden <lboomgaarden@crowleyfleck.com>, James Kaste <james.kaste@wyo.gov>, "Jeffrey S. Pope" <JSPope@hollandhart.com>
> Cc: Isaac Sutphin <INSutphin@hollandhart.com>, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>, Thomas Sansonetti <TLSansonetti@hollandhart.com>, Michael Klein <m.klein@lhr-inc.com>
>
> All,

Please find the attached, executed agreement on behalf of Big Horn Coal Company, I will be sending the original to BJ this afternoon.

Thank You,

Jordan

cid:image002.jpg@01D0737D.EE1A4670

Jordan Sweeney, Corporate Environmental Manager

O 801.539.3820 | **M** 801.712.7571 | lighthouseresourcesinc.com

10980 South Jordan Gateway | South Jordan, UT 84095

We have moved to a new office. Please make note of my new address.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

Lighthouse
RESOURCES INC

From:	Andrew Kuhlmann
To:	Todd Parfitt; Alan Edwards
Subject:	Fwd: Wyoming EQC Pleading(s) Approved
Date:	Tuesday, October 25, 2016 4:01:36 PM

Todd and Alan,

I wanted to let you know that the letter regarding the Brook Mine case was filed and the EQC put it in their electronic system, so the parties should have automatically received copies.

Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

---------- Forwarded message ----------
From: <eqc-notification@wyo.gov>
Date: Tue, Oct 25, 2016 at 3:02 PM
Subject: Wyoming EQC Pleading(s) Approved
To:

New pleading(s) approved for In Re Brook Mine Application :
Letter from Director Parfitt
Click HERE to view approved Orders and Pleadings for this docket.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Alan Edwards
To:	BJ Kristiansen; Mark Rogaczewski
Subject:	Fwd: Wyoming EQC Pleading(s) Approved
Date:	Tuesday, October 25, 2016 4:08:17 PM

---------- Forwarded message ----------
From: **Andrew Kuhlmann** <andrew.kuhlmann@wyo.gov>
Date: Tue, Oct 25, 2016 at 4:01 PM
Subject: Fwd: Wyoming EQC Pleading(s) Approved
To: Todd Parfitt <todd.parfitt@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>

Todd and Alan,

I wanted to let you know that the letter regarding the Brook Mine case was filed and the EQC put it in their electronic system, so the parties should have automatically received copies.

Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

---------- Forwarded message ----------
From: <eqc-notification@wyo.gov>
Date: Tue, Oct 25, 2016 at 3:02 PM
Subject: Wyoming EQC Pleading(s) Approved
To:

New pleading(s) approved for In Re Brook Mine Application :
Letter from Director Parfitt
Click HERE to view approved Orders and Pleadings for this docket.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

From: BJ Kristiansen
To: Alan Edwards
Subject: Re: Wyoming EQC Pleading(s) Approved
Date: Wednesday, October 26, 2016 6:52:46 AM

Thank you for the update Alan, I appreciate it.
-bj

On Tue, Oct 25, 2016 at 4:08 PM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> ---------- Forwarded message ----------
> From: **Andrew Kuhlmann** <andrew.kuhlmann@wyo.gov>
> Date: Tue, Oct 25, 2016 at 4:01 PM
> Subject: Fwd: Wyoming EQC Pleading(s) Approved
> To: Todd Parfitt <todd.parfitt@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>
>
> Todd and Alan,
>
> I wanted to let you know that the letter regarding the Brook Mine case was filed and the EQC put it in their electronic system, so the parties should have automatically received copies.
>
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
> ---------- Forwarded message ----------
> From: <eqc-notification@wyo.gov>
> Date: Tue, Oct 25, 2016 at 3:02 PM
> Subject: Wyoming EQC Pleading(s) Approved
> To:
>
> New pleading(s) approved for In Re Brook Mine Application :
> Letter from Director Parfitt

Click HERE to view approved Orders and Pleadings for this docket.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Alan Edwards
Subject: Re: Wyoming EQC Pleading(s) Approved
Date: Wednesday, October 26, 2016 6:53:50 AM

Oops, I mean Andrew. I blame the coffee.

On Wed, Oct 26, 2016 at 6:52 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Thank you for the update Alan, I appreciate it.
> -bj
>
> On Tue, Oct 25, 2016 at 4:08 PM, Alan Edwards <alan.edwards@wyo.gov> wrote:
>
>> ---------- Forwarded message ----------
>> From: **Andrew Kuhlmann** <andrew.kuhlmann@wyo.gov>
>> Date: Tue, Oct 25, 2016 at 4:01 PM
>> Subject: Fwd: Wyoming EQC Pleading(s) Approved
>> To: Todd Parfitt <todd.parfitt@wyo.gov>, Alan Edwards <alan.edwards@wyo.gov>
>
>> Todd and Alan,
>
>> I wanted to let you know that the letter regarding the Brook Mine case was filed and the EQC put it in their electronic system, so the parties should have automatically received copies.
>
>> Andrew
>
>> --
>> Andrew J. Kuhlmann
>> Senior Assistant Attorney General
>> Water & Natural Resources Division
>> Wyoming Attorney General's Office
>> 2320 Capitol Avenue ***Please note the new mailing address**
>> Cheyenne, WY 82002
>> 307-777-3537 - Phone
>> 307-777-3542 - Fax
>
>> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
>> ---------- Forwarded message ----------
>> From: <eqc-notification@wyo.gov>
>> Date: Tue, Oct 25, 2016 at 3:02 PM
>> Subject: Wyoming EQC Pleading(s) Approved

To:

New pleading(s) approved for In Re Brook Mine Application :
Letter from Director Parfitt
Click HERE to view approved Orders and Pleadings for this docket.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

--
Bj Kristiansen, P.G.
Natural Resources Program Principal

Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: Alan Edwards
Subject: Fwd: Wyoming EQC Pleading(s) Approved
Date: Thursday, November 17, 2016 8:21:28 AM

Alan,

Here's Brook's response that just came in.

Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

---------- Forwarded message ----------
From: <eqc-notification@wyo.gov>
Date: Thu, Nov 17, 2016 at 8:17 AM
Subject: Wyoming EQC Pleading(s) Approved
To:

New pleading(s) approved for In Re Brook Mine Application :
Petitioner Response to BHC Obj to Proposed Ord
Click HERE to view approved Orders and Pleadings for this docket.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: Jim Ruby
Subject: Re: Wyoming EQC Pleading(s) Approved
Date: Thursday, November 17, 2016 3:40:11 PM

Jim,

I apologize if you've already heard back from one of the parties on this, but the PDF of the Brook Mine order only includes the order's odd pages.

Andrew

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

---------- Forwarded message ----------
From: <eqc-notification@wyo.gov>
Date: Thu, Nov 17, 2016 at 3:21 PM
Subject: Wyoming EQC Pleading(s) Approved
To:

New pleading(s) approved for In Re Brook Mine Application :
FOFCLO FINAL
Click HERE to view approved Orders and Pleadings for this docket.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Jim Ruby
To: Andrew Kuhlmann; ryan schelhaas
Subject: Re: Wyoming EQC Pleading(s) Approved
Date: Thursday, November 17, 2016 3:49:48 PM

Thanks I am fixing it. Didn't notice that it was two sided so when I scanned it I left out the even pages. Will be up on site shortly.

Jim

On Thu, Nov 17, 2016 at 3:40 PM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Jim,
>
> I apologize if you've already heard back from one of the parties on this, but the PDF of the Brook Mine order only includes the order's odd pages.
>
> Andrew
>
> --
> Andrew J. Kuhlmann
> Senior Assistant Attorney General
> Water & Natural Resources Division
> Wyoming Attorney General's Office
> 2320 Capitol Avenue
> Cheyenne, WY 82002
> 307-777-3537 - Phone
> 307-777-3542 - Fax
>
> ***Please note the new mailing address**
>
> *The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.
>
> ---------- Forwarded message ----------
> From: <eqc-notification@wyo.gov>
> Date: Thu, Nov 17, 2016 at 3:21 PM
> Subject: Wyoming EQC Pleading(s) Approved
> To:
>
> New pleading(s) approved for In Re Brook Mine Application :
> FOFCLO FINAL
> Click HERE to view approved Orders and Pleadings for this docket.
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	Jeff Barron, P.E.; Randall Atkins
Cc:	Alan Edwards; Mark Rogaczewski; andrew kuhlmann
Subject:	Brook Mine Permit Application, TFN 6 2/025, Second public notice
Date:	Thursday, December 01, 2016 3:45:18 PM
Attachments:	tech complete.pdf Public Notice 2nd.doc

Gentlemen,

I have attached an electronic copy of the Second Publication instructions from LQD for the proposed Brook Mine. You will be receiving the printed copy within the next two to three working days. Please contact me or Mark Rogaczewski with questions or comments.

-Bj Kristiansen

--

Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Department of Environmental Quality

To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations

Matthew H. Mead, Governor

Todd Parfitt, Director

CERTIFIED MAIL # 7010 3090 0001 6474 3560
RETURN RECEIPT REQUESTED

December 1, 2016

Mr. Randall Atkins
c/o WWC Engineering
1849 Terra Ave.
Sheridan, WY 82801

RE: Brook Mine Coal Mine Permit Application Technical Adequacy, TFN 6 2/025

Dear Mr. Atkins,

After reviewing the sixth round Mine Permit Application materials received from Ramaco on November 17, 2016, I have now deemed the application Technically Adequate per W.S. § 35-11-406 (e). This permit application is ready for Public Notice and filing with the County Clerk per W.S. § 35-11-406 (j).

Please proceed with publication, mailing requirements, and filing with the County Clerk's Office per Coal SOP 1.9 notice sheet (attached). Supply the Publisher's Affidavit, Clerks Affidavit and Sworn Statement of Mailing (format attached) to the DEQ per Coal SOP 1.9. It should be understood that neither the Clerk filing nor the public notice in anyway constitute tentative or preliminary approval of this permit application.

If you have questions, please contact me at (307) 675-5615 or Mark Rogaczewski at (307) 675-5616.

Sincerely,

Bjarne Kristiansen, PG
Natural Resources Program Principal
WDEQ/LQD District III

2100 West 5th Street · Sheridan, WY 82801
(307) 673-9337 · FAX (307) 672-2213

Surface Coal Mining Permits

NEWSPAPER PUBLICATION AND NOTIFICATION
FOR PROPOSED SURFACE COAL MINING PERMIT OR AMENDMENT

W.S. §35-11-406(j) - Second Publication

Upon notification by the Land Quality Division the applicant shall commence the following:

1. A copy of the application needs to be filed with the Office of the County Clerk in the counties in which the proposed permit area is located no later than the first day of publication. THIS COPY SHOULD BE REMOVED FROM THE COUNTY CLERK'S OFFICE AFTER PERMIT APPROVAL. **Immediately following filing, submit an affidavit of filing from the Office of the County Clerk to the Land Quality Division.**

2. Publish a notice in a newspaper of general circulation in the locality of the proposed operation once a week for four (4) consecutive weeks (see sample format below) and if necessary, provide a detailed description for any public road within 100' of the permit area or any public road that will be relocated.

3. Mail, within five (5) days after the first publication, copies of the notice to all parties as given in W.S. §35-11-406(j) (as amended in 1995), and an application mine plan map to the Wyoming Oil and Gas Commission, P.O. Box 2640, Casper, WY 82602.

4. As soon as possible and several weeks before the end of the public comment period, submit a sworn statement of mailing to the Land Quality Division. Please use the example affidavit of mailing which is attached.

5. On completion of publication submit a sworn affidavit from the newspaper and a copy of the notice to the Land Quality Division.

SECOND PUBLICATION - SAMPLE FORMAT FOR SURFACE COAL MINING PERMITS/AMENDMENTS

Public Notice

The (Company Name) of (Main Company Location) has applied for a coal mining permit/permit amendment from the Land Quality Division of the Department of Environmental Quality for the State of Wyoming. The coal mining permit (amendment) area will be located in: (legal description of permit area - Section, Township, Range, County Name) County, Wyoming. (The area is) approximately (Locate the area relative to the closest town and a natural landmark, i.e.: a water source or a physical attribute of the area - ex: road, cliff, mountain, canyon, gorge, desert, etc.) . This area can be found on the _____ USGS quadrangle map(s). The proposed operation is scheduled to begin (month and year) and is estimated to continue until (year). The land, after mining, will be returned to a (proposed use).* Information regarding the proposed mining operation and reclamation procedures may be reviewed in the Office of the Land Quality Division of the Department of Environmental Quality in Cheyenne and (Lander or Sheridan, Wyoming) , the office of (Company Name) in (location) , or the (County Name) County Clerk's Office _____, Wyoming. Written objections to the proposed mining operation must be received by the Administrator of the Land Quality Division, Department of Environmental Quality, 200 W. 17th Street, Cheyenne, WY 82002, before the close of business (Date 30 days after last publication). The Director may hold an informal conference if requested, hear the complaint and take action on the application in accordance with the Department's Rules of Practice and Procedure. The complainants shall have a right of appeal to the Environmental Quality Council where the complaint will be heard a second time. A conference shall be held if the Director determines that the nature of the complaint or the position of the complainants indicates that an attempt to informally resolve the disputes is preferable to a contested case proceeding. An informal conference or a public hearing shall be held within twenty (20) days after the final date for filing objections unless a different period is stipulated to by the parties. The Council or Director shall publish notice of the time, date and location of the hearing or conference in a newspaper of general circulation in the locality of the proposed operation once a week for two (2) consecutive weeks immediately prior to the hearing or conference. The hearing would be conducted as a contested case in accordance with the Wyoming Administrative Procedure Act (W.S. §16-3-101 through §16-3-115), and the right of judicial review would be afforded as provided in that act. All parties as given in W.S. §35-11-406(j) will be mailed a copy of this notice. The Wyoming Oil and Gas Commission will be mailed a copy of the application mine plan map as required by W.S. §35-11-406(j).

BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION

IN THE MATTER OF THE (TYPE OF PERMIT))
PERMIT APPLICATION OF (ENTITY),)
TFN 6 2/025.)

AFFIDAVIT OF (NAME OF AFFIANT)
OF NOTICE

I, (NAME), after being duly sworn upon my oath, deposes and states as follows:

1. I am appointed to the office of (POSITION), for (COMPANY). I am submitting this affidavit to comply with the sworn statement requirement in W.S. §35-11-406(j). In my capacity as (POSITION), I am responsible for ensuring that (COMPANY NAME) has complied with the notice requirements in W.S. §35-11-406(j) for the above-captioned permit application. This application is for a surface coal mining permit/permit amendment.

2. On (DATE), (COMPANY NAME) received notice from the Department of Environmental Quality, Land Quality Division that it has determined our application is complete and suitable for final publication.

3. On (DATE), (NAME OF NEWSPAPER) printed the first notice in the required four week sequence for final publication of this application. On (DATE), (COMPANY NAME) mailed a copy of the notice to all surface owners of record of the land within the proposed permit area, to all surface owners of record of immediately adjacent lands, and to all surface owners within one-half (1/2) mile of the proposed mining site. On (DATE), (COMPANY NAME) mailed a copy of the application mining plan map to the Wyoming Oil and Gas Commission.

DATED _____.

(SIGNATURE HERE_____)
(TYPE NAME AND TITLE HERE)

STATE OF WYOMING)
) ss.
COUNTY OF _____)

Subscribed, sworn to and acknowledged before me by (NAME) on this ___ day of _____, 20___.

_____
Notary Public

My Commission expires:_____

From:	Jeff Barron
To:	BJ Kristiansen
Subject:	RE: Brook Mine Permit Application, TFN 6 2/025, Second public notice
Date:	Thursday, December 01, 2016 3:46:06 PM

Thanks

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Thursday, December 01, 2016 3:45 PM
To: Jeff Barron <jbarron@wwcengineering.com>; Randall Atkins <rwa.ramaco@gmail.com>
Cc: Alan Edwards <alan.edwards@wyo.gov>; Mark Rogaczewski <mark.rogaczewski@wyo.gov>; andrew kuhlmann <andrew.kuhlmann@wyo.gov>
Subject: Brook Mine Permit Application, TFN 6 2/025, Second public notice

Gentlemen,

I have attached an electronic copy of the Second Publication instructions from LQD for the proposed Brook Mine. You will be receiving the printed copy within the next two to three working days. Please contact me or Mark Rogaczewski with questions or comments.

-Bj Kristiansen

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Jeff Barron
Subject: Re: Brook Mine Permit Application, TFN 6 2/025, Second public notice
Date: Thursday, December 01, 2016 3:48:28 PM

You're welcome.

On Thu, Dec 1, 2016 at 3:46 PM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> Thanks
>
> **From:** BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
> **Sent:** Thursday, December 01, 2016 3:45 PM
> **To:** Jeff Barron <jbarron@wwcengineering.com>; Randall Atkins <rwa.ramaco@gmail.com>
> **Cc:** Alan Edwards <alan.edwards@wyo.gov>; Mark Rogaczewski <mark.rogaczewski@wyo.gov>; andrew kuhlmann <andrew.kuhlmann@wyo.gov>
> **Subject:** Brook Mine Permit Application, TFN 6 2/025, Second public notice
>
> Gentlemen,
>
> I have attached an electronic copy of the Second Publication instructions from LQD for the proposed Brook Mine. You will be receiving the printed copy within the next two to three working days. Please contact me or Mark Rogaczewski with questions or comments.
>
> -Bj Kristiansen
>
> --
>
> Bj Kristiansen, P.G.
>
> Natural Resources Program Principal
>
> Department of Environmental Quality
>
> Land Quality Division, District III
>
> 2100 W. 5th Street
>
> Sheridan, WY 82801

(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

From:	Jeff Barron
To:	BJ Kristiansen
Subject:	RE: Brook Mine Permit Application, TFN 6 2/025, Second public notice
Date:	Friday, December 02, 2016 8:24:38 AM
Attachments:	SECOND PUBLICATION_12_2_2017.docx

BJ,

As promised for red face check.

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Thursday, December 01, 2016 3:45 PM
To: Jeff Barron <jbarron@wwcengineering.com>; Randall Atkins <rwa.ramaco@gmail.com>
Cc: Alan Edwards <alan.edwards@wyo.gov>; Mark Rogaczewski <mark.rogaczewski@wyo.gov>; andrew kuhlmann <andrew.kuhlmann@wyo.gov>
Subject: Brook Mine Permit Application, TFN 6 2/025, Second public notice

Gentlemen,

I have attached an electronic copy of the Second Publication instructions from LQD for the proposed Brook Mine. You will be receiving the printed copy within the next two to three working days. Please contact me or Mark Rogaczewski with questions or comments.

-Bj Kristiansen

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

SECOND PUBLICATION - SAMPLE FORMAT FOR SURFACE COAL MINING PERMITS/AMENDMENTS

Public Notice

The Brook Mining Co., LLC of 1101 Sugarview Drive, Suite 201, Sheridan, WY 82801 has applied for a coal mining permit from the Land Quality Division of the Department of Environmental Quality for the State of Wyoming. The coal mining permit area will be located in: Sections 10, 11, 12, 13, 14 and 15 Township 57N, Range 85W, and Sections 7, 8, 9, 10, 15, 17, 18, 20, 21, 22 and 27 Township 57N, Range 84W Sheridan County, Wyoming. The Brook Mine is located approximately 6 miles Northwest of Sheridan, Wyoming. This area can be found on the Acme and Monarch USGS quadrangle maps. The proposed operation is scheduled to begin July 2017 and is estimated to continue until 2032. The land, after mining, will be returned to a grazing land use. Information regarding the proposed mining operation and reclamation procedures may be reviewed in the Office of the Land Quality Division of the Department of Environmental Quality in Cheyenne and Sheridan, Wyoming, the office of RAMACO in Sheridan, WY, or the Sheridan County Clerk's Office Sheridan, Wyoming. Written objections to the proposed mining operation must be received by the Administrator of the Land Quality Division, Department of Environmental Quality, 200 W. 17th Street, Cheyenne, WY 82002, before the close of business January 27, 2017. The Director may hold an informal conference if requested, hear the complaint and take action on the application in accordance with the Department's Rules of Practice and Procedure. The complainants shall have a right of appeal to the Environmental Quality Council where the complaint will be heard a second time. A conference shall be held if the Director determines that the nature of the complaint or the position of the complainants indicates that an attempt to informally resolve the disputes is preferable to a contested case proceeding. An informal conference or a public hearing shall be held within twenty (20) days after the final date for filing objections unless a different period is stipulated to by the parties. The Council or Director shall publish notice of the time, date and location of the hearing or conference in a newspaper of general circulation in the locality of the proposed operation once a week for two (2) consecutive weeks immediately prior to the hearing or conference. The hearing would be conducted as a contested case in accordance with the Wyoming Administrative Procedure Act (W.S. §16-3-101 through §16-3-115), and the right of judicial review would be afforded as provided in that act. All parties as given in W.S. §35-11-406(j) will be mailed a copy of this notice. The Wyoming Oil and Gas Commission will be mailed a copy of the application mine plan map as required by W.S. §35-11-406(j).

From: BJ Kristiansen
To: Matthew Kunze
Subject: Brook Mine CHIA draft submittal
Date: Friday, December 02, 2016 8:29:50 AM

Matt,

The Brook Mine second public notice was authorized yesterday afternoon. The public comment/objection period will expire on January 30, 2017. Let me know what you need from me, if necessary.

-bj

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Jeff Barron
Subject: Re: Brook Mine Permit Application, TFN 6 2/025, Second public notice
Date: Friday, December 02, 2016 8:42:11 AM

Looks OK to me, Jeff. Go ahead and publish it.

-bj

On Fri, Dec 2, 2016 at 8:24 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> BJ,
>
> As promised for red face check.
>
> **From:** BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
> **Sent:** Thursday, December 01, 2016 3:45 PM
> **To:** Jeff Barron <jbarron@wwcengineering.com>; Randall Atkins <rwa.ramaco@gmail.com>
> **Cc:** Alan Edwards <alan.edwards@wyo.gov>; Mark Rogaczewski <mark.rogaczewski@wyo.gov>; andrew kuhlmann <andrew.kuhlmann@wyo.gov>
> **Subject:** Brook Mine Permit Application, TFN 6 2/025, Second public notice
>
> Gentlemen,
>
> I have attached an electronic copy of the Second Publication instructions from LQD for the proposed Brook Mine. You will be receiving the printed copy within the next two to three working days. Please contact me or Mark Rogaczewski with questions or comments.
>
> -Bj Kristiansen
>
> --
>
> Bj Kristiansen, P.G.
>
> Natural Resources Program Principal
>
> Department of Environmental Quality
>
> Land Quality Division, District III

2100 W. 5th Street

Sheridan, WY 82801

(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

From: Jeff Barron
To: BJ Kristiansen
Subject: RE: Brook Mine Permit Application, TFN 6 2/025, Second public notice
Date: Friday, December 02, 2016 8:42:57 AM

Thanks for your review

From: BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
Sent: Friday, December 02, 2016 8:42 AM
To: Jeff Barron <jbarron@wwcengineering.com>
Subject: Re: Brook Mine Permit Application, TFN 6 2/025, Second public notice

Looks OK to me, Jeff. Go ahead and publish it.

-bj

On Fri, Dec 2, 2016 at 8:24 AM, Jeff Barron <jbarron@wwcengineering.com> wrote:

> BJ,
>
> As promised for red face check.
>
> **From:** BJ Kristiansen [mailto:bj.kristiansen@wyo.gov]
> **Sent:** Thursday, December 01, 2016 3:45 PM
> **To:** Jeff Barron <jbarron@wwcengineering.com>; Randall Atkins <rwa.ramaco@gmail.com>
> **Cc:** Alan Edwards <alan.edwards@wyo.gov>; Mark Rogaczewski <mark.rogaczewski@wyo.gov>; andrew kuhlmann <andrew.kuhlmann@wyo.gov>
> **Subject:** Brook Mine Permit Application, TFN 6 2/025, Second public notice
>
> Gentlemen,
>
> I have attached an electronic copy of the Second Publication instructions from LQD for the proposed Brook Mine. You will be receiving the printed copy within the next two to three working days. Please contact me or Mark Rogaczewski with questions or comments.
>
> -Bj Kristiansen
>
> --
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction

> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	David Myers; David Schellinger; Doug Emme; Jaime Jakes; Stacy Page; Matthew Kunze; Muthu Kuchanur; Kim Medina; Mark Rogaczewski
Subject:	Brook Mine permit application, State Decision Document , TFN 6 2/025
Date:	Friday, December 02, 2016 8:52:39 AM

Folks, we have sent the second public notice authorization to Ramaco for the Brook Mine. It is now time to craft the Sate Decision Document. I would like to meet with you all after the staff meeting on Monday morning, December 5th. Let me know if you can't make it and we will figure out how to ensure that all participants in the Brook Mine permit application review can be heard.

Muthu and Matt, I will call you early next week, probably Monday afternoon, to determine what yet needs to be done from your end of the process. I will be writing the geology and hydrology section myself, with help from staff here in Sheridan. Anything regarding the CHIA or other hydrologic issues will be presented to you as they arise for your input.

-bj

--

Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: Muthu Kuchanur
Cc: BJ Kristiansen
Subject: Re: Brook Mine permit application, State Decision Document , TFN 6 2/025
Date: Monday, December 05, 2016 7:24:32 AM

Thanks for the update Bj. I will get the CHIA ready for review today and let you know when it is available for your review.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Fri, Dec 2, 2016 at 2:56 PM, Muthu Kuchanur <muthu.kuchanur@wyo.gov> wrote:

> Thanks BJ for the update. Feel free to let us know if you need any assistance. Wish you a good week end.
>
> ---
>
> Muthu Kuchanur, Ph.D., P.E.
>
> Geology Supervisor,
> Division Services - Land Quality Division,
> Wyoming Department of Environmental Quality,
> Cheyenne - 82001
>
> Phone: 307-777-7132
> Email: muthu.kuchanur@wyo.gov
>
> On Fri, Dec 2, 2016 at 8:52 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
> > Folks, we have sent the second public notice authorization to Ramaco for the Brook Mine. It is now time to craft the Sate Decision Document. I would like to meet with you all after the staff meeting on Monday morning, December 5th. Let me know if you can't make it and we will figure out how to ensure that all participants in the Brook Mine permit application review can be heard.
> >
> > Muthu and Matt, I will call you early next week, probably Monday afternoon, to determine what yet needs to be done from your end of the process. I will be writing the geology and hydrology section myself, with help from staff here in Sheridan. Anything regarding the CHIA or other hydrologic issues will be presented to you as they arise for your input.
> >
> > -bj
> >
> > --
> > Bj Kristiansen, P.G.

Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze; Muthu Kuchanur
Subject: Brook Mine CHIA
Date: Monday, December 05, 2016 10:40:31 AM

Gentlemen,

At this point, I only need you folks to work through the CHIA as you are already doing. If anything else comes up I'll let you know.

-bj

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Cc: Muthu Kuchanur
Subject: Re: Brook Mine CHIA
Date: Monday, December 05, 2016 11:08:15 AM

Ok Bj. I am waiting to get the review request memo back from Kyle but I will let you know.

One thing I noticed in the CHIA is that we have the mining date starting in 2016, because that is what the permit application states. Obviously mining will not be happening this year but maybe I can check back with you on how to address a comment on this if we get one.

A couple of other things I wanted to keep you aware of was the commitment in the permit application to sample the stockponds prior to disturbance and also to install the alluvial monitoring wells in the Tongue River prior to disturbance. We reference the Tongue River wells in the CHIA but not the stockponds.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Mon, Dec 5, 2016 at 10:40 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen,
>
> At this point, I only need you folks to work through the CHIA as you are already doing. If anything else comes up I'll let you know.
>
> -bj
>
> --
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: Re: Brook Mine CHIA
Date: Monday, December 05, 2016 11:13:20 AM

Matt, Brook has decided to use a start date of July 1, 2017. This is fairly arbitrary at this time but it puts a date out there that may be achievable. If that gets updated, which I'm sure will happen, I will let you know.

-bj

On Mon, Dec 5, 2016 at 11:07 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Ok Bj. I am waiting to get the review request memo back from Kyle but I will let you know.
>
> One thing I noticed in the CHIA is that we have the mining date starting in 2016, because that is what the permit application states. Obviously mining will not be happening this year but maybe I can check back with you on how to address a comment on this if we get one.
>
> A couple of other things I wanted to keep you aware of was the commitment in the permit application to sample the stockponds prior to disturbance and also to install the alluvial monitoring wells in the Tongue River prior to disturbance. We reference the Tongue River wells in the CHIA but not the stockponds.
>
> Matt
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
> On Mon, Dec 5, 2016 at 10:40 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
>> Gentlemen,
>>
>> At this point, I only need you folks to work through the CHIA as you are already doing. If anything else comes up I'll let you know.
>>
>> -bj
>>
>> --
>> Bj Kristiansen, P.G.
>> Natural Resources Program Principal
>> Department of Environmental Quality
>> Land Quality Division, District III
>> 2100 W. 5th Street
>> Sheridan, WY 82801

> > (307) 675-5615
>
> > E-Mail to and from me, in connection with the transaction
> > of public business, is subject to the Wyoming Public Records
> > Act and may be disclosed to third parties.
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Brook Mine CHIA
Date: Monday, December 05, 2016 11:17:42 AM

Bj,

Do you suggest I change the CHIA to reflect that? I was sticking to what is shown in the permit application. I believe "year 0" was designated as 2016.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Mon, Dec 5, 2016 at 11:13 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt, Brook has decided to use a start date of July 1, 2017. This is fairly arbitrary at this time but it puts a date out there that may be achievable. If that gets updated, which I'm sure will happen, I will let you know.
>
> -bj
>
> On Mon, Dec 5, 2016 at 11:07 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Ok Bj. I am waiting to get the review request memo back from Kyle but I will let you know.
>>
>> One thing I noticed in the CHIA is that we have the mining date starting in 2016, because that is what the permit application states. Obviously mining will not be happening this year but maybe I can check back with you on how to address a comment on this if we get one.
>>
>> A couple of other things I wanted to keep you aware of was the commitment in the permit application to sample the stockponds prior to disturbance and also to install the alluvial monitoring wells in the Tongue River prior to disturbance. We reference the Tongue River wells in the CHIA but not the stockponds.
>>
>> Matt
>>
>> ---
>>
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055

matthew.kunze@wyo.gov

On Mon, Dec 5, 2016 at 10:40 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

Gentlemen,

At this point, I only need you folks to work through the CHIA as you are already doing. If anything else comes up I'll let you know.

-bj

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: Re: Brook Mine CHIA
Date: Monday, December 05, 2016 11:34:03 AM

Matt,

Year 0 will obviously have to be 2017 since the earliest date that the permit would be issued is around February 1, 2017. I expect to see some objections to the mine on climate change issues and CO2 emissions. There may also be others but Todd will have to decide if they are substantive.

-bj

On Mon, Dec 5, 2016 at 11:17 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Bj,
>
> Do you suggest I change the CHIA to reflect that? I was sticking to what is shown in the permit application. I believe "year 0" was designated as 2016.
>
> Matt
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
> On Mon, Dec 5, 2016 at 11:13 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
>> Matt, Brook has decided to use a start date of July 1, 2017. This is fairly arbitrary at this time but it puts a date out there that may be achievable. If that gets updated, which I'm sure will happen, I will let you know.
>>
>> -bj
>>
>> On Mon, Dec 5, 2016 at 11:07 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>>
>>> Ok Bj. I am waiting to get the review request memo back from Kyle but I will let you know.
>>>
>>> One thing I noticed in the CHIA is that we have the mining date starting in 2016, because that is what the permit application states. Obviously mining will not be happening this year but maybe I can check back with you on how to address a comment on this if we get one.
>>>
>>> A couple of other things I wanted to keep you aware of was the commitment in the permit application to sample the stockponds prior to disturbance and also to install the alluvial monitoring wells in the Tongue River prior to disturbance. We reference the Tongue River wells in the CHIA but not the stockponds.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Mon, Dec 5, 2016 at 10:40 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Gentlemen,
>
> At this point, I only need you folks to work through the CHIA as you are already doing. If anything else comes up I'll let you know.
>
> -bj
>
> --
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

> > E-Mail to and from me, in connection with the transaction
> > of public business, is subject to the Wyoming Public Records
> > Act and may be disclosed to third parties.

> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Brook Mine CHIA
Date: Monday, December 05, 2016 11:36:13 AM

Ok thanks. Perhaps what I can write is that mining would occur for a 12 year period beginning in approximately 2017.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Mon, Dec 5, 2016 at 11:34 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> Year 0 will obviously have to be 2017 since the earliest date that the permit would be issued is around February 1, 2017. I expect to see some objections to the mine on climate change issues and CO2 emissions. There may also be others but Todd will have to decide if they are substantive.
>
> -bj
>
> On Mon, Dec 5, 2016 at 11:17 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Bj,
>>
>> Do you suggest I change the CHIA to reflect that? I was sticking to what is shown in the permit application. I believe "year 0" was designated as 2016.
>>
>> Matt
>>
>>
>>
>>
>> ---
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055
>> matthew.kunze@wyo.gov
>>
>>
>> On Mon, Dec 5, 2016 at 11:13 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>>
>>> Matt, Brook has decided to use a start date of July 1, 2017. This is fairly arbitrary at this time but it puts a date out there that may be achievable. If that gets updated, which I'm sure will happen, I will let you know.
>>>
>>> -bj

On Mon, Dec 5, 2016 at 11:07 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

Ok Bj. I am waiting to get the review request memo back from Kyle but I will let you know.

One thing I noticed in the CHIA is that we have the mining date starting in 2016, because that is what the permit application states. Obviously mining will not be happening this year but maybe I can check back with you on how to address a comment on this if we get one.

A couple of other things I wanted to keep you aware of was the commitment in the permit application to sample the stockponds prior to disturbance and also to install the alluvial monitoring wells in the Tongue River prior to disturbance. We reference the Tongue River wells in the CHIA but not the stockponds.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Mon, Dec 5, 2016 at 10:40 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

Gentlemen,

At this point, I only need you folks to work through the CHIA as you are already doing. If anything else comes up I'll let you know.

-bj

--

Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	BJ Kristiansen
To:	David Myers; David Schellinger; Matthew Kunze; Muthu Kuchanur; Stacy Page; Jaime Jakes; Kim Medina
Cc:	Mark Rogaczewski
Subject:	Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date:	Tuesday, December 06, 2016 11:21:27 AM
Attachments:	SDD assignments.pdf

Folks,

The Brook Mine second public notice will begin its publishing cycle tomorrow, December 7th. It will end on January 6, 2017 and the 60 day comment period is February 5, 2017. The State Decision Document needs to be in final draft form by the end of the first 30 day period. This will be your deadline to get the materials you have written to me. In turn, I will compile the draft and send it for Brook Mine review by Friday, January 13, 2017. As it says in the memo, if you run into timing problems, let me know and we can work something out. Obviously, this is the holiday season and time is tight so if there are issues we need to tackle them as soon as possible.

-bj

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

MEMORANDUM

To: Dave Myers, Dave Schellinger, Matt Kunze, Muthu Kuchanur, Stacy Page, Jamie Jakes, Kim Medina, File

From: Bj Kristiansen, PG

Date: December 6, 2016

Re: Brook Mining Co., LLC; Brook Mine Coal Mine Permit Application, **TFN 6 2/025**

The Second Public Notice for the RAMACO Coal Mine Permit Application was sent to the Sheridan Press and will be published for the first time on Wednesday, December 7, 2016. The first 30 day period will end on Friday, January 6, 2017. The end of the 60 day comment period will be on Sunday, February 5, 2017.

I am requesting your assistance in Crafting the State Decision Document. Please review the sections of of the permit materials that correspond to the sections you examined during the technical review. I request your sections of the Decision Document by Friday, January 6, 2017, at the end of the first 30 days.

VOLUME	SECTION	DESCRIPTION	ASSIGNED STAFF
Volume I and II		Adjudication	Bj
Volume III	Appendix D1	Land Use	Bj
	Appendix D2	History	Bj
	Appendix D3	Archeological Resources	N/A
	Appendix D4	Climatology	Bj
Volume IV	Appendix D5	Topography	Dave Myers
		Geology	Kim Medina
		Overburden Assessment	Dave Schillinger
Volume V	Appendix D6	Hydrology-surface	Dave Myers
		Hydrology-groundwater	Kim Medina
		CHIA	Matt Kunze, Muthu Kuchanur
Volume VI	Appendix D7	Soil Resources	Dave Schellinger
Volume VII	Appendix D8	Vegetation	Stacey Page, Jamie Jakes
Volume VIII	Appendix D9	Wildlife	Dave Myers
Volume IX	Appendix D10	Wetlands	Dave Myers
Volume X	Appendix D11	AVF	Bj
Volume XI	Appendix D11	Mine Plan	Staff, in areas of their expertise
Volume XII	Appendix D12	Reclamation Plan	Staff, in areas of their expertise

One of the resources available to us as a guideline is the recent SDD from Eagle Butte. It can be used as an example of content, style, and communicating the core issues in a brief yet informative way. Other SDDs that are fairly recent could also be used as a guide. If you find yourself struggling with the content, let me know and we can work out a mutually agreeable format for your segment of the document. In this case, brevity with well-focused narrative is an asset an should help with time management.

Please contact me if there is a problem with the timing of the review and we can work out alternative schedules, if necessary. The documents are in the library and if you need an electronic copy, I can make one available on the Sheridan server. It has been a two year slog with this permit and I deeply appreciate the assistance and encouragement you have all provided.

Sincerely,

Bj Kristiansen, PG
Natural Resources Program Principal
LQD - District III

/bk

cc: Cheyenne LQD files

From: Matthew Kunze
To: BJ Kristiansen
Cc: Muthu Kuchanur
Subject: Re: Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date: Wednesday, December 07, 2016 9:18:49 AM

Bj,

I will write up the section for Finding No. 3 for the SDD and send it to you soon. But since we will not have the reviews back on the CHIA until after January 6, 2017 there may be some additional edits to make after that date.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Dec 6, 2016 at 11:21 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Folks,
>
> The Brook Mine second public notice will begin its publishing cycle tomorrow, December 7th. It will end on January 6, 2017 and the 60 day comment period is February 5, 2017. The State Decision Document needs to be in final draft form by the end of the first 30 day period. This will be your deadline to get the materials you have written to me. In turn, I will compile the draft and send it for Brook Mine review by Friday, January 13, 2017. As it says in the memo, if you run into timing problems, let me know and we can work something out. Obviously, this is the holiday season and time is tight so if there are issues we need to tackle them as soon as possible.
>
> -bj
>
> --
>
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
>
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.
>

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: kim.pandullo@wyo.gov; Andrew Kuhlmann
Subject: New Event: Brook Mine case debrief @ Mon Dec 12, 2016 11am - 12pm (kyle.wendtland@wyo.gov)
Date: Wednesday, December 07, 2016 3:52:32 PM
Attachments: invite.ics

Brook Mine case debrief

more details »

Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent

When Mon Dec 12, 2016 11am – 12pm Mountain Time

Where DEQ (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case

Calendar kyle.wendtland@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- kyle.wendtland@wyo.gov
- eva.la@wyo.gov
- alan.edwards@wyo.gov

Invitation from Google Calendar

You are receiving this email at the account kim.pandullo@wyo.gov because you are subscribed for new event updates on calendar kyle.wendtland@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_156.ics (1463 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: kyle.wendtland@wyo.gov; eva.la@wyo.gov; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Brook Mine case debrief @ Mon Dec 12, 2016 11am - 12pm (kyle.wendtland@wyo.gov)
Date: Wednesday, December 07, 2016 3:52:32 PM
Attachments: invite.ics

Brook Mine case debrief

more details »

Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent

When Mon Dec 12, 2016 11am – 12pm Mountain Time

Where DEQ (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case

Calendar kyle.wendtland@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- kyle.wendtland@wyo.gov
- eva.la@wyo.gov
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account kyle.wendtland@wyo.gov because you are subscribed for invitations on calendar kyle.wendtland@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_157.ics (1545 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: eva.la@wyo.gov; kyle.wendtland@wyo.gov; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Brook Mine case debrief @ Mon Dec 12, 2016 11am - 12pm (eva.la@wyo.gov)
Date: Wednesday, December 07, 2016 3:52:32 PM
Attachments: invite.ics

Brook Mine case debrief

more details »

Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent

When Mon Dec 12, 2016 11am – 12pm Mountain Time

Where DEQ (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case

Calendar eva.la@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- eva.la@wyo.gov
- kyle.wendtland@wyo.gov
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account eva.la@wyo.gov because you are subscribed for invitations on calendar eva.la@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_158.ics (1534 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; kyle.wendtland@wyo.gov; eva.la@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Brook Mine case debrief @ Mon Dec 12, 2016 11am - 12pm (alan.edwards@wyo.gov)
Date: Wednesday, December 07, 2016 3:52:33 PM
Attachments: invite.ics

Brook Mine case debrief

more details »

Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent

When Mon Dec 12, 2016 11am – 12pm Mountain Time

Where DEQ (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case

Calendar alan.edwards@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- kyle.wendtland@wyo.gov
- eva.la@wyo.gov
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_159.ics (1542 Bytes) cannot be converted to PDF format.

From: Kim Medina
To: mark.rogaczewski@wyo.gov; Matthew Kunze; BJ Kristiansen; muthu.kuchanur@wyo.gov; Kim Medina
Subject: Invitation: Brook Mine CHIA discussion @ Mon Dec 12, 2016 1pm - 2pm (Mark Rogaczewski)
Date: Thursday, December 08, 2016 10:02:26 AM
Attachments: invite.ics

Brook Mine CHIA discussion

more details »

When Mon Dec 12, 2016 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-chia

Calendar Mark Rogaczewski

Who
- Kim Medina - organizer
- Matthew Kunze
- BJ Kristiansen
- muthu.kuchanur@wyo.gov
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for invitations on calendar Mark Rogaczewski.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_160.ics (1488 Bytes) cannot be converted to PDF format.

From: Kim Medina
To: matthew.kunze@wyo.gov; BJ Kristiansen; Mark Rogaczewski; muthu.kuchanur@wyo.gov; Kim Medina
Subject: Invitation: Brook Mine CHIA discussion @ Mon Dec 12, 2016 1pm - 2pm (Matthew Kunze)
Date: Thursday, December 08, 2016 10:02:26 AM
Attachments: invite.ics

Brook Mine CHIA discussion

more details »

When Mon Dec 12, 2016 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-chia

Calendar Matthew Kunze

Who
- Kim Medina - organizer
- BJ Kristiansen
- Mark Rogaczewski
- Matthew Kunze
- muthu.kuchanur@wyo.gov

Going? Yes - Maybe - No more options »

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for invitations on calendar Matthew Kunze.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_161.ics (1484 Bytes) cannot be converted to PDF format.

From: Kim Medina
To: bj.kristiansen@wyo.gov; muthu.kuchanur@wyo.gov; Mark Rogaczewski; Matthew Kunze; Kim Medina
Subject: Invitation: Brook Mine CHIA discussion @ Mon Dec 12, 2016 1pm - 2pm (BJ Kristiansen)
Date: Thursday, December 08, 2016 10:02:27 AM
Attachments: invite.ics

Brook Mine CHIA discussion

more details »

When Mon Dec 12, 2016 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-chia

Calendar BJ Kristiansen

Who
- Kim Medina - organizer
- muthu.kuchanur@wyo.gov
- BJ Kristiansen
- Mark Rogaczewski
- Matthew Kunze

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account bj.kristiansen@wyo.gov because you are subscribed for invitations on calendar BJ Kristiansen.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_162.ics (1486 Bytes) cannot be converted to PDF format.

From: Kim Medina
To: muthu.kuchanur@wyo.gov; BJ Kristiansen; Matthew Kunze; Mark Rogaczewski; Kim Medina
Subject: Invitation: Brook Mine CHIA discussion @ Mon Dec 12, 2016 1pm - 2pm (muthu.kuchanur@wyo.gov)
Date: Thursday, December 08, 2016 10:02:28 AM
Attachments: invite.ics

Brook Mine CHIA discussion

more details »

When Mon Dec 12, 2016 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-chia

Calendar muthu.kuchanur@wyo.gov

Who
- Kim Medina - organizer
- BJ Kristiansen
- Matthew Kunze
- muthu.kuchanur@wyo.gov
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account muthu.kuchanur@wyo.gov because you are subscribed for invitations on calendar muthu.kuchanur@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_163.ics (1486 Bytes) cannot be converted to PDF format.

From:	andrew.kuhlmann@wyo.gov
To:	alan.edwards@wyo.gov; eva.la@wyo.gov; andrew.kuhlmann@wyo.gov; kyle.wendtland@wyo.gov; andrew.kuhlmann@wyo.gov
Subject:	[Update] Brook Mine case debrief
Date:	Friday, December 09, 2016 3:35:39 PM

All,

Due to unfortunate family circumstances, I need to be out of town on Monday and Tuesday. I believe I can still call in for a meeting on Monday, but I was wondering if we could move it to 3pm.

Thanks,
Andrew

Brook Mine case debrief

Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent

When	Mon Dec 12, 2016 11am – 12pm Mountain Time
Where	DEQ (map)
Video call	https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case
Who	• andrew.kuhlmann@wyo.gov - organizer • alan.edwards@wyo.gov • eva.la@wyo.gov • kyle.wendtland@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Alan Edwards
To: andrew kuhlmann
Subject: Re: [Update] Brook Mine case debrief
Date: Friday, December 09, 2016 3:58:11 PM

If everyone is available how about we move it to Thursday and all meet in person.

On Fri, Dec 9, 2016 at 3:35 PM, <andrew.kuhlmann@wyo.gov> wrote:

> All,
>
> Due to unfortunate family circumstances, I need to be out of town on Monday and Tuesday. I believe I can still call in for a meeting on Monday, but I was wondering if we could move it to 3pm.
>
> Thanks,
> Andrew
>
> **Brook Mine case debrief**
>
> Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent
>
> When Mon Dec 12, 2016 11am – 12pm Mountain Time
>
> Where DEQ (map)
>
> Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case
>
> Who
> - andrew.kuhlmann@wyo.gov - organizer
> - alan.edwards@wyo.gov
> - eva.la@wyo.gov
> - kyle.wendtland@wyo.gov
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

From:	Andrew Kuhlmann
To:	Alan Edwards
Cc:	Eva La; Kyle Wendtland
Subject:	Re: [Update] Brook Mine case debrief
Date:	Sunday, December 11, 2016 5:35:58 AM

Alan,

I believe that Eva is unavailable any day except for Monday. But I should be back in the office by Thursday, and that day is mostly open on my schedule.

Andrew

On Friday, December 9, 2016, Alan Edwards <alan.edwards@wyo.gov> wrote:
> If everyone is available how about we move it to Thursday and all meet in person.
> On Fri, Dec 9, 2016 at 3:35 PM, <andrew.kuhlmann@wyo.gov> wrote:
>>
>> All,
>>
>> Due to unfortunate family circumstances, I need to be out of town on Monday and Tuesday. I believe I can still call in for a meeting on Monday, but I was wondering if we could move it to 3pm.
>>
>> Thanks,
>> Andrew
>>
>> Brook Mine case debrief
>>
>> Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent
>> When
>> Mon Dec 12, 2016 11am – 12pm Mountain Time
>> Where
>> DEQ (map)
>> Video call
>> https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case
>> Who
>> •
>> andrew.kuhlmann@wyo.gov - organizer
>> •
>> alan.edwards@wyo.gov
>> •
>> eva.la@wyo.gov
>> •
>> kyle.wendtland@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction
>> of public business, is subject to the Wyoming Public Records
>> Act and may be disclosed to third parties.
>

>
>
> --
> Alan Edwards
> Deputy Director
> Administrator, Abandoned Mine Lands
> 200 West 17th Street
> Cheyenne, Wyoming 82002
> Office: 307-777-7062
> Alan.Edwards@wyo.gov
> PLEASE NOTE CHANGE IN ADDRESS
>
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.
>

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

***Please note the new mailing address**

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Andrew Kuhlmann
Cc:	Eva La; Kyle Wendtland
Subject:	Re: [Update] Brook Mine case debrief
Date:	Sunday, December 11, 2016 11:45:38 AM

Eva said the two of you have been discussing this issue. What I want to make sure is we have the best legal grounding before we begin the surface bond development for Brook. What we do needs to best inform any future permits. If you are comfortable on that respect let us know what time works best for you Thursday. I am generally open but don't know about Kyle. Alan

Sent from my iPhone

On Dec 11, 2016, at 5:35 AM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

> Alan,
>
> I believe that Eva is unavailable any day except for Monday. But I should be back in the office by Thursday, and that day is mostly open on my schedule.
>
> Andrew
>
>
> On Friday, December 9, 2016, Alan Edwards <alan.edwards@wyo.gov> wrote:
> > If everyone is available how about we move it to Thursday and all meet in person.
> > On Fri, Dec 9, 2016 at 3:35 PM, <andrew.kuhlmann@wyo.gov> wrote:
> >>
> >> All,
> >>
> >> Due to unfortunate family circumstances, I need to be out of town on Monday and Tuesday. I believe I can still call in for a meeting on Monday, but I was wondering if we could move it to 3pm.
> >>
> >> Thanks,
> >> Andrew
> >>
> >> Brook Mine case debrief
> >>
> >> Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent
> >> When
> >> Mon Dec 12, 2016 11am – 12pm Mountain Time
> >> Where
> >> DEQ (map)
> >> Video call

>> https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case
>> Who
>> •
>> andrew.kuhlmann@wyo.gov - organizer
>> •
>> alan.edwards@wyo.gov
>> •
>> eva.la@wyo.gov
>> •
>> kyle.wendtland@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction
>> of public business, is subject to the Wyoming Public Records
>> Act and may be disclosed to third parties.
>
>
>
> --
> Alan Edwards
> Deputy Director
> Administrator, Abandoned Mine Lands
> 200 West 17th Street
> Cheyenne, Wyoming 82002
> Office: 307-777-7062
> Alan.Edwards@wyo.gov
> PLEASE NOTE CHANGE IN ADDRESS
>
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.
>

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue ***Please note the new mailing address**
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Eva La
To:	Alan Edwards
Cc:	Andrew Kuhlmann; Kyle Wendtland
Subject:	Re: [Update] Brook Mine case debrief
Date:	Monday, December 12, 2016 7:32:23 AM

Good Morning All,

I hope you had a good weekend. I will be in DC for the NRC program on Wed-Thurs. However, please feel free to meet without me if necessary. Andrew can fill me in with any information I need to know. Any day next week also looks wide open for me. Thank you.

Sincerely,

Eva La
Assistant Attorney General
State of Wyoming's Attorney General's Office
Water and Natural Resources Division
2320 Capitol Ave.
Cheyenne, WY 82002
(307)-777-7376

ATTENTION: This e-mail transmission and any attachments to it contains information from the Wyoming Attorney General's Office which is confidential and/or privileged. The information is intended to be solely for the use of the individual or entity named above. If you are not the intended recipient, any disclosure, copying, distribution or the use of the contents of this information is prohibited. If you have received this e-mail in error, please immediately notify me by telephone or return e-mail so that I can arrange for the deletion of the information and destruction of any copies that have been made at no cost to you. Email to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

On Sun, Dec 11, 2016 at 11:45 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> Eva said the two of you have been discussing this issue. What I want to make sure is we have the best legal grounding before we begin the surface bond development for Brook. What we do needs to best inform any future permits. If you are comfortable on that respect let us know what time works best for you Thursday. I am generally open but don't know about Kyle. Alan
>
> Sent from my iPhone
>
> On Dec 11, 2016, at 5:35 AM, Andrew Kuhlmann <andrew.kuhlmann@wyo.gov> wrote:

Alan,

I believe that Eva is unavailable any day except for Monday. But I should be back in the office by Thursday, and that day is mostly open on my schedule.

Andrew

On Friday, December 9, 2016, Alan Edwards <alan.edwards@wyo.gov> wrote:
> If everyone is available how about we move it to Thursday and all meet in person.
> On Fri, Dec 9, 2016 at 3:35 PM, <andrew.kuhlmann@wyo.gov> wrote:
>>
>> All,
>>
>> Due to unfortunate family circumstances, I need to be out of town on Monday and Tuesday. I believe I can still call in for a meeting on Monday, but I was wondering if we could move it to 3pm.
>>
>> Thanks,
>> Andrew
>>
>> Brook Mine case debrief
>>
>> Discussion on Brook Mine case's potential affects on future LQD applications, such as the potential for more requests for orders in lieu of surface owner consent
>> When
>> Mon Dec 12, 2016 11am – 12pm Mountain Time
>> Where
>> DEQ (map)
>> Video call
>> https://plus.google.com/hangouts/_/wyo.gov/brook-mine-case
>> Who
>> •
>> andrew.kuhlmann@wyo.gov - organizer
>> •
>> alan.edwards@wyo.gov
>> •
>> eva.la@wyo.gov
>> •
>> kyle.wendtland@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction
>> of public business, is subject to the Wyoming Public Records
>> Act and may be disclosed to third parties.
>
>
>

> --
> Alan Edwards
> Deputy Director
> Administrator, Abandoned Mine Lands
> 200 West 17th Street
> Cheyenne, Wyoming 82002
> Office: 307-777-7062
> Alan.Edwards@wyo.gov
> PLEASE NOTE CHANGE IN ADDRESS
>
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.
>

--
Andrew J. Kuhlmann
Senior Assistant Attorney General
Water & Natural Resources Division
Wyoming Attorney General's Office
2320 Capitol Avenue ***Please note the new mailing address**
Cheyenne, WY 82002
307-777-3537 - Phone
307-777-3542 - Fax

*The information provided in this communication is confidential and protected and is intended only for the use of the addressee. The information may be privileged attorney-client communication, attorney work product, deliberative process, or otherwise confidential under law. Unauthorized use, disclosure, or copying of such information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the Water and Natural Resources Division immediately by replying to the message or calling (307) 777-6946.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date: Monday, December 12, 2016 7:57:30 AM

Bj,

Do you have an electronic PDF copy of the latest and consolidated version of the application? It looks like our last PDFs here were the replacement pages from Round 3 in December 2015.

Thanks, Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Dec 6, 2016 at 11:21 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Folks,
>
> The Brook Mine second public notice will begin its publishing cycle tomorrow, December 7th. It will end on January 6, 2017 and the 60 day comment period is February 5, 2017. The State Decision Document needs to be in final draft form by the end of the first 30 day period. This will be your deadline to get the materials you have written to me. In turn, I will compile the draft and send it for Brook Mine review by Friday, January 13, 2017. As it says in the memo, if you run into timing problems, let me know and we can work something out. Obviously, this is the holiday season and time is tight so if there are issues we need to tackle them as soon as possible.
>
> -bj
>
> --
> Bj Kristiansen, P.G.
> Natural Resources Program Principal
> Department of Environmental Quality
> Land Quality Division, District III
> 2100 W. 5th Street
> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

From: Google Calendar
To: Matthew Kunze; Kim Medina
Subject: Notification: Brook Mine CHIA discussion @ Mon Dec 12, 2016 1pm - 2pm (Matthew Kunze)
Date: Monday, December 12, 2016 12:45:03 PM

Brook Mine CHIA discussion

more details »

When Mon Dec 12, 2016 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-chia

Calendar Matthew Kunze

Who
- Kim Medina - organizer
- BJ Kristiansen
- Mark Rogaczewski
- Matthew Kunze
- muthu.kuchanur@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you are subscribed for notifications on calendar Matthew Kunze.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Matthew Kunze; Matthew Kunze
Subject: Notification: Brook Mine CHIA discussion @ Mon Dec 12, 2016 1pm - 2pm (Hydro Library)
Date: Monday, December 12, 2016 12:45:09 PM

Brook Mine CHIA discussion

more details »

When Mon Dec 12, 2016 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-chia

Calendar Hydro Library

Who
- Matthew Kunze - creator

Invitation from Google Calendar

You are receiving this email at the account matthew.kunze@wyo.gov because you set a notification for this event on the calendar Hydro Library.

You can change your notifications for specific events in the event details page in https://www.google.com/calendar/.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Muthu Kuchanur; Kim Medina
Subject: Notification: Brook Mine CHIA discussion @ Mon Dec 12, 2016 1pm - 2pm (muthu.kuchanur@wyo.gov)
Date: Monday, December 12, 2016 12:49:48 PM

Brook Mine CHIA discussion

more details »

When Mon Dec 12, 2016 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-chia

Calendar muthu.kuchanur@wyo.gov

Who
- Kim Medina - organizer
- BJ Kristiansen
- muthu.kuchanur@wyo.gov
- Matthew Kunze
- Mark Rogaczewski

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account muthu.kuchanur@wyo.gov because you are subscribed for notifications on calendar muthu.kuchanur@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Google Calendar
To: Mark Rogaczewski; Kim Medina
Subject: Notification: Brook Mine CHIA discussion @ Mon Dec 12, 2016 1pm - 2pm (Mark Rogaczewski)
Date: Monday, December 12, 2016 12:49:56 PM

Brook Mine CHIA discussion

more details »

When Mon Dec 12, 2016 1pm – 2pm Mountain Time

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine-chia

Calendar Mark Rogaczewski

Who
- Kim Medina - organizer
- muthu.kuchanur@wyo.gov
- Mark Rogaczewski
- Matthew Kunze
- BJ Kristiansen

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account mark.rogaczewski@wyo.gov because you are subscribed for notifications on calendar Mark Rogaczewski.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: Re: Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date: Monday, December 12, 2016 2:11:07 PM

Matt,

The replacement pages from Round 3 are the latest versions of the permit application that we have on record. Rounds 4 through 6 all dealt with the surface owner issues that lead to the Order in Lieu of Consent. So you have the most recent stuff. Also. thanks for the phone call today. I got a lot out of it to help me understand you and Muthu's goals and way of thinking. It was worthwhile. Tell Muthu he did good.

-bj

On Mon, Dec 12, 2016 at 7:57 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Bj,
>
> Do you have an electronic PDF copy of the latest and consolidated version of the application? It looks like our last PDFs here were the replacement pages from Round 3 in December 2015.
>
> Thanks, Matt
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
> On Tue, Dec 6, 2016 at 11:21 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
>> Folks,
>>
>> The Brook Mine second public notice will begin its publishing cycle tomorrow, December 7th. It will end on January 6, 2017 and the 60 day comment period is February 5, 2017. The State Decision Document needs to be in final draft form by the end of the first 30 day period. This will be your deadline to get the materials you have written to me. In turn, I will compile the draft and send it for Brook Mine review by Friday, January 13, 2017. As it says in the memo, if you run into timing problems, let me know and we can work something out. Obviously, this is the holiday season and time is tight so if there are issues we need to tackle them as soon as possible.
>>
>> -bj
>>
>> --
>> Bj Kristiansen, P.G.
>> Natural Resources Program Principal
>> Department of Environmental Quality
>> Land Quality Division, District III
>> 2100 W. 5th Street

> Sheridan, WY 82801
> (307) 675-5615
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: BJ Kristiansen
Subject: Re: Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date: Monday, December 12, 2016 2:28:07 PM

Ok thanks Bj. Good to know we have the latest PDFs. Glad we had the call to help explain a few things; we will add the points of clarification like we discussed. I will let Muthu know you appreciated it.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Mon, Dec 12, 2016 at 2:11 PM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

> Matt,
>
> The replacement pages from Round 3 are the latest versions of the permit application that we have on record. Rounds 4 through 6 all dealt with the surface owner issues that lead to the Order in Lieu of Consent. So you have the most recent stuff. Also. thanks for the phone call today. I got a lot out of it to help me understand you and Muthu's goals and way of thinking. It was worthwhile. Tell Muthu he did good.
>
> -bj
>
> On Mon, Dec 12, 2016 at 7:57 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Bj,
>>
>> Do you have an electronic PDF copy of the latest and consolidated version of the application? It looks like our last PDFs here were the replacement pages from Round 3 in December 2015.
>>
>> Thanks, Matt
>>
>>
>>
>>
>> ---
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055
>> matthew.kunze@wyo.gov
>>
>>
>> On Tue, Dec 6, 2016 at 11:21 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>>
>>> Folks,

The Brook Mine second public notice will begin its publishing cycle tomorrow, December 7th. It will end on January 6, 2017 and the 60 day comment period is February 5, 2017. The State Decision Document needs to be in final draft form by the end of the first 30 day period. This will be your deadline to get the materials you have written to me. In turn, I will compile the draft and send it for Brook Mine review by Friday, January 13, 2017. As it says in the memo, if you run into timing problems, let me know and we can work something out. Obviously, this is the holiday season and time is tight so if there are issues we need to tackle them as soon as possible.

-bj

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Matthew Kunze
To:	Muthu Kuchanur
Subject:	Fwd: Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date:	Monday, December 12, 2016 2:29:20 PM

Note of appreciation from Bj..

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

---------- Forwarded message ----------
From: **BJ Kristiansen** <bj.kristiansen@wyo.gov>
Date: Mon, Dec 12, 2016 at 2:11 PM
Subject: Re: Brook Mine permit application, TFN 6 2/025, State Decision Document.
To: Matthew Kunze <matthew.kunze@wyo.gov>

Matt,

The replacement pages from Round 3 are the latest versions of the permit application that we have on record. Rounds 4 through 6 all dealt with the surface owner issues that lead to the Order in Lieu of Consent. So you have the most recent stuff. Also. thanks for the phone call today. I got a lot out of it to help me understand you and Muthu's goals and way of thinking. It was worthwhile. Tell Muthu he did good.

-bj

On Mon, Dec 12, 2016 at 7:57 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Bj,
>
> Do you have an electronic PDF copy of the latest and consolidated version of the application? It looks like our last PDFs here were the replacement pages from Round 3 in December 2015.
>
> Thanks, Matt
>
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
>
> On Tue, Dec 6, 2016 at 11:21 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:

Folks,

The Brook Mine second public notice will begin its publishing cycle tomorrow, December 7th. It will end on January 6, 2017 and the 60 day comment period is February 5, 2017. The State Decision Document needs to be in final draft form by the end of the first 30 day period. This will be your deadline to get the materials you have written to me. In turn, I will compile the draft and send it for Brook Mine review by Friday, January 13, 2017. As it says in the memo, if you run into timing problems, let me know and we can work something out. Obviously, this is the holiday season and time is tight so if there are issues we need to tackle them as soon as possible.

-bj

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Andrew Kuhlmann
To: kyle.wendtland@wyo.gov; alan.edwards@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Brook Mine Debrief @ Thu Dec 15, 2016 3pm - 4pm (kyle.wendtland@wyo.gov)
Date: Thursday, December 15, 2016 10:57:36 AM
Attachments: invite.ics

Brook Mine Debrief

more details »

When Thu Dec 15, 2016 3pm – 4pm Mountain Time

Where Kyle's Office, LQD (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine

Calendar kyle.wendtland@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- kyle.wendtland@wyo.gov
- alan.edwards@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account kyle.wendtland@wyo.gov because you are subscribed for invitations on calendar kyle.wendtland@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_164.ics (1247 Bytes) cannot be converted to PDF format.

From: Andrew Kuhlmann
To: alan.edwards@wyo.gov; kyle.wendtland@wyo.gov; Andrew Kuhlmann
Subject: Invitation: Brook Mine Debrief @ Thu Dec 15, 2016 3pm - 4pm (alan.edwards@wyo.gov)
Date: Thursday, December 15, 2016 10:57:36 AM
Attachments: invite.ics

Brook Mine Debrief

more details »

When Thu Dec 15, 2016 3pm – 4pm Mountain Time

Where Kyle's Office, LQD (map)

Video call https://plus.google.com/hangouts/_/wyo.gov/brook-mine

Calendar alan.edwards@wyo.gov

Who
- andrew.kuhlmann@wyo.gov - organizer
- alan.edwards@wyo.gov
- kyle.wendtland@wyo.gov

Going? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account alan.edwards@wyo.gov because you are subscribed for invitations on calendar alan.edwards@wyo.gov.

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Attachment invite_165.ics (1244 Bytes) cannot be converted to PDF format.

From: Matthew Kunze
To: Kim Medina
Cc: Muthu Kuchanur
Subject: Re: Review of Brook Mine CHIA
Date: Friday, December 30, 2016 3:30:34 PM

Ok thanks Kim. We will take a look in the next few weeks and get back to you on how we responded to the comments.

Happy New Year

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Fri, Dec 30, 2016 at 10:00 AM, Kim Medina <kim.medina@wyo.gov> wrote:

> I am very sorry about that Matt - I had asked Bj to send it to you once he and Mark had reviewed it (I was out on inspections for the next couple of days). Guess he didn't send it to you electronically like I had thought.
>
> On Fri, Dec 30, 2016 at 9:28 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Kim,
>>
>> Can you please send me and Muthu an electronic copy of your comments on the Brook Mine CHIA. I just found your December 13 memo in the file.
>>
>> Thanks, Matt
>>
>> ---
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055
>> matthew.kunze@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.
>
> --
> Kim Medina
> Department of Environmental Quality

Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Kim Medina
To: Matthew Kunze
Subject: Re: Review of Brook Mine CHIA
Date: Tuesday, January 03, 2017 6:54:03 AM

I am curious why you need to prepare a formal response to my review comments.

On Fri, Dec 30, 2016 at 3:30 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Ok thanks Kim. We will take a look in the next few weeks and get back to you on how we responded to the comments.
>
> Happy New Year
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
> On Fri, Dec 30, 2016 at 10:00 AM, Kim Medina <kim.medina@wyo.gov> wrote:
>
>> I am very sorry about that Matt - I had asked Bj to send it to you once he and Mark had reviewed it (I was out on inspections for the next couple of days). Guess he didn't send it to you electronically like I had thought.
>>
>> On Fri, Dec 30, 2016 at 9:28 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>>
>>> Kim,
>>>
>>> Can you please send me and Muthu an electronic copy of your comments on the Brook Mine CHIA. I just found your December 13 memo in the file.
>>>
>>> Thanks, Matt
>>>
>>> ---
>>> Matt Kunze
>>> Wyoming Department of Environmental Quality
>>> Land Quality Division
>>> 200 W. 17th St., Suite 10
>>> Cheyenne, WY 82002
>>> 307-777-7055
>>> matthew.kunze@wyo.gov
>>>
>>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: kim.medina@wyo.gov
Subject: Out of the office Re: Review of Brook Mine CHIA
Date: Tuesday, January 03, 2017 6:54:05 AM

Hello,

I am out of the office on leave until Friday January 6th. I will reply to your email when I return to the office.

Thanks, Matt

--

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: BJ Kristiansen
To: Matthew Kunze
Subject: Re: Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date: Tuesday, January 03, 2017 8:13:10 AM

Thanks Matt, I appreciate it.

-bj

On Fri, Dec 30, 2016 at 3:25 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> Bj,
>
> I have attached a write-up for Finding No. 3 for the SDD. Please note I have left in highlighting a few sentences that would need updated once we get the CHIA reviews back and we have finalized the CHIA. The write-up is a little lengthy but is pretty much taken from the executive summary of the CHIA. If you'd like it to be shorter, please let me know and I can revise. I am out of the office until next Friday the 6th.
>
> Matt
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
> On Tue, Dec 6, 2016 at 11:21 AM, BJ Kristiansen <bj.kristiansen@wyo.gov> wrote:
>
>> Folks,
>>
>> The Brook Mine second public notice will begin its publishing cycle tomorrow, December 7th. It will end on January 6, 2017 and the 60 day comment period is February 5, 2017. The State Decision Document needs to be in final draft form by the end of the first 30 day period. This will be your deadline to get the materials you have written to me. In turn, I will compile the draft and send it for Brook Mine review by Friday, January 13, 2017. As it says in the memo, if you run into timing problems, let me know and we can work something out. Obviously, this is the holiday season and time is tight so if there are issues we need to tackle them as soon as possible.
>>
>> -bj
>>
>> --
>> Bj Kristiansen, P.G.
>> Natural Resources Program Principal
>> Department of Environmental Quality
>> Land Quality Division, District III
>> 2100 W. 5th Street
>> Sheridan, WY 82801
>> (307) 675-5615

> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Bj Kristiansen, P.G.
Natural Resources Program Principal
Department of Environmental Quality
Land Quality Division, District III
2100 W. 5th Street
Sheridan, WY 82801
(307) 675-5615

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: bj.kristiansen@wyo.gov
Subject: Out of the office Re: Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date: Tuesday, January 03, 2017 8:13:11 AM

Hello,

I am out of the office on leave until Friday January 6th. I will reply to your email when I return to the office.

Thanks, Matt

--

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: bj.kristiansen@wyo.gov
Subject: Out of the office Re: Brook Mine permit application, TFN 6 2/025, State Decision Document.
Date: Tuesday, January 03, 2017 8:13:11 AM

Hello,

I am out of the office on leave until Friday January 6th. I will reply to your email when I return to the office.

Thanks, Matt

--

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

From: Matthew Kunze
To: Kim Medina
Subject: Re: Review of Brook Mine CHIA
Date: Friday, January 06, 2017 7:24:43 AM

I guess I see it as a courtesy since you are taking the time to review it and prepare a memo. Do you think it's unnecessary?

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Tue, Jan 3, 2017 at 6:54 AM, Kim Medina <kim.medina@wyo.gov> wrote:

> I am curious why you need to prepare a formal response to my review comments.
>
> On Fri, Dec 30, 2016 at 3:30 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
> > Ok thanks Kim. We will take a look in the next few weeks and get back to you on how we responded to the comments.
> >
> > Happy New Year
> >
> > ---
> > Matt Kunze
> > Wyoming Department of Environmental Quality
> > Land Quality Division
> > 200 W. 17th St., Suite 10
> > Cheyenne, WY 82002
> > 307-777-7055
> > matthew.kunze@wyo.gov
> >
> > On Fri, Dec 30, 2016 at 10:00 AM, Kim Medina <kim.medina@wyo.gov> wrote:
> >
> > > I am very sorry about that Matt - I had asked Bj to send it to you once he and Mark had reviewed it (I was out on inspections for the next couple of days). Guess he didn't send it to you electronically like I had thought.
> > >
> > > On Fri, Dec 30, 2016 at 9:28 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
> > >
> > > > Kim,
> > > >
> > > > Can you please send me and Muthu an electronic copy of your comments on the Brook Mine CHIA. I just found your December 13 memo in the file.
> > > >
> > > > Thanks, Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Kim Medina
To: Matthew Kunze
Subject: Re: Review of Brook Mine CHIA
Date: Friday, January 06, 2017 8:01:06 AM

I would be okay with a brief email - "thanks for your comments, brief summary of those you didn't find useful, etc". That kind of feedback is a nice way for me to learn about the CHIA process as well. It is up to you if you want to continue the formal response. As these are internal LQD reviews, a less formal response might work better as the formal reviews sometimes appear as if I am not part of the LQD "team".

On Fri, Jan 6, 2017 at 7:24 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

> I guess I see it as a courtesy since you are taking the time to review it and prepare a memo. Do you think it's unnecessary?
>
> Matt
>
> ---
> Matt Kunze
> Wyoming Department of Environmental Quality
> Land Quality Division
> 200 W. 17th St., Suite 10
> Cheyenne, WY 82002
> 307-777-7055
> matthew.kunze@wyo.gov
>
> On Tue, Jan 3, 2017 at 6:54 AM, Kim Medina <kim.medina@wyo.gov> wrote:
>
>> I am curious why you need to prepare a formal response to my review comments.
>>
>> On Fri, Dec 30, 2016 at 3:30 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>>
>>> Ok thanks Kim. We will take a look in the next few weeks and get back to you on how we responded to the comments.
>>>
>>> Happy New Year
>>>
>>> ---
>>> Matt Kunze
>>> Wyoming Department of Environmental Quality
>>> Land Quality Division
>>> 200 W. 17th St., Suite 10
>>> Cheyenne, WY 82002
>>> 307-777-7055
>>> matthew.kunze@wyo.gov
>>>
>>> On Fri, Dec 30, 2016 at 10:00 AM, Kim Medina <kim.medina@wyo.gov> wrote:
>>>
>>>> I am very sorry about that Matt - I had asked Bj to send it to you once he and Mark had reviewed it (I was out on inspections for the next couple of days). Guess he didn't send it to you electronically like I had thought.

On Fri, Dec 30, 2016 at 9:28 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:

Kim,

Can you please send me and Muthu an electronic copy of your comments on the Brook Mine CHIA. I just found your December 13 memo in the file.

Thanks, Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Kim Medina
Department of Environmental Quality

Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Matthew Kunze
To: Kim Medina
Subject: Re: Review of Brook Mine CHIA
Date: Friday, January 06, 2017 8:14:41 AM

Ok we can do it that way starting with the Brook Mine review. We can make it more informal with an email response.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Fri, Jan 6, 2017 at 8:01 AM, Kim Medina <kim.medina@wyo.gov> wrote:

> I would be okay with a brief email - "thanks for your comments, brief summary of those you didn't find useful, etc". That kind of feedback is a nice way for me to learn about the CHIA process as well. It is up to you if you want to continue the formal response. As these are internal LQD reviews, a less formal response might work better as the formal reviews sometimes appear as if I am not part of the LQD "team".
>
> On Fri, Jan 6, 2017 at 7:24 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> I guess I see it as a courtesy since you are taking the time to review it and prepare a memo. Do you think it's unnecessary?
>>
>> Matt
>>
>>
>>
>> ---
>>
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055
>> matthew.kunze@wyo.gov
>>
>> On Tue, Jan 3, 2017 at 6:54 AM, Kim Medina <kim.medina@wyo.gov> wrote:
>>
>>> I am curious why you need to prepare a formal response to my review comments.
>>>
>>> On Fri, Dec 30, 2016 at 3:30 PM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>>>
>>>> Ok thanks Kim. We will take a look in the next few weeks and get back to you on how we responded to the comments.

Happy New Year

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

On Fri, Dec 30, 2016 at 10:00 AM, Kim Medina <kim.medina@wyo.gov> wrote:

> I am very sorry about that Matt - I had asked Bj to send it to you once he and Mark had reviewed it (I was out on inspections for the next couple of days). Guess he didn't send it to you electronically like I had thought.
>
> On Fri, Dec 30, 2016 at 9:28 AM, Matthew Kunze <matthew.kunze@wyo.gov> wrote:
>
>> Kim,
>>
>> Can you please send me and Muthu an electronic copy of your comments on the Brook Mine CHIA. I just found your December 13 memo in the file.
>>
>> Thanks, Matt
>>
>> ---
>> Matt Kunze
>> Wyoming Department of Environmental Quality
>> Land Quality Division
>> 200 W. 17th St., Suite 10
>> Cheyenne, WY 82002
>> 307-777-7055
>> matthew.kunze@wyo.gov
>>
>> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Kim Medina
Department of Environmental Quality
Project Geologist
Land Quality Division - District 3
2100 W. 5th St.
Sheridan, WY 82801

Off: (307) 675-5620

email: kim.medina@wyo.gov

E-Mail to and from me, in connection with the transaction

of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Wyoming Department of Environmental Quality
To: matthew.kunze@wyo.gov; WYODEQ@public.govdelivery.com
Subject: Brook Mining Co., LLC - Coal Mining Permit Application 2nd Notice
Date: Wednesday, January 11, 2017 4:00:05 PM

Wyoming Department of Environmental Quality | view as a webpage

Wyoming Department of Environmental Quality

Public Notice of Brook Mining Co., LLC Permit Application

The Brook Mining Co., LLC of 1101 Sugarview Drive, Suite 201, Sheridan, WY 82801 has applied for a coal mining permit from the Land Quality Division of the Department of Environmental Quality for the State of Wyoming. The coal mining permit area will be located in: Sections 10, 11, 12, 13, 14 and 15 Township 57N, Range 85W, and Sections 7, 8, 9, 10, 15, 17, 18, 20, 21, 22 and 27 Township 57N, Range 84W Sheridan County, Wyoming. The Brook Mine is located approximately 6 miles Northwest of Sheridan, Wyoming. This area can be found on the Acme and Monarch USGS quadrangle maps. The proposed operation is scheduled to begin July 2017 and is estimated to continue until 2032. The land, after mining, will be returned to a grazing land use. Information regarding the proposed mining operation and reclamation procedures may be reviewed in the Office of the Land Quality Division of the Department of Environmental Quality in Cheyenne and Sheridan, Wyoming, the office of RAMACO in Sheridan, WY, or the Sheridan County Clerk's Office Sheridan, Wyoming. Written objections to the proposed mining operation must be received by the Administrator of the Land Quality Division, Department of Environmental Quality, 200 W. 17th Street, Cheyenne, WY 82002, before the close of business January 27, 2017. The Director may hold an informal conference if requested, hear the complaint and take action on the application in accordance with the Department's Rules of Practice and Procedure. The complainants shall have a right of appeal to the Environmental Quality Council where the complaint will be heard a second time. A conference shall be held if the Director determines that the nature of the complaint or the position of the complainants indicates that an attempt to informally resolve the disputes is preferable to a contested case proceeding. An informal conference or a public hearing shall be held within twenty (20) days after the final date for filing objections unless a different period is stipulated to by the parties. The Council or Director shall publish notice of the time, date and location of the hearing or conference in a newspaper of general circulation in the locality of the proposed operation once a week for two (2) consecutive weeks immediately prior to the hearing or conference. The hearing would be conducted as a contested case in accordance with the Wyoming Administrative Procedure Act (W.S. §16-3-101 through §16-3-115), and the right of judicial review would be afforded as provided in that act. All parties as given in W.S. §35-11-406(j) will be mailed a copy of this notice. The Wyoming Oil and Gas Commission will be mailed a copy of the application mine plan map as required by W.S. §35-11-406(j).

Please note that the Wyoming Department of Environmental Quality Cheyenne Office has moved.
The new address is:

200 West 17th Street
Cheyenne, WY 82002

stay connected:

unsubscribe | manage preferences | help

This email was sent to matthew.kunze@wyo.gov using GovDelivery, on behalf of: Wyoming Department of Environmental Quality · 122 West 25th St, Herschler Building · Cheyenne, WY 82002

From:	Matthew Kunze
To:	Carol Bilbrough
Subject:	Fwd: Brook Mining Co., LLC - Coal Mining Permit Application 2nd Notice
Date:	Wednesday, January 11, 2017 4:06:31 PM

Here is the notice that confirms it is the 27th.

Matt

Matt Kunze
Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th St., Suite 10
Cheyenne, WY 82002
307-777-7055
matthew.kunze@wyo.gov

---------- Forwarded message ----------
From: **Wyoming Department of Environmental Quality**
<WYODEQ@public.govdelivery.com>
Date: Wed, Jan 11, 2017 at 4:00 PM
Subject: Brook Mining Co., LLC - Coal Mining Permit Application 2nd Notice
To: matthew.kunze@wyo.gov

Wyoming Department of Environmental Quality | view as a webpage

Wyoming Department of Environmental Quality

Public Notice of Brook Mining Co., LLC Permit Application

The Brook Mining Co., LLC of 1101 Sugarview Drive, Suite 201, Sheridan, WY 82801 has applied for a coal mining permit from the Land Quality Division of the Department of Environmental Quality for the State of Wyoming. The coal mining permit area will be located in: Sections 10, 11, 12, 13, 14 and 15 Township 57N, Range 85W, and Sections 7, 8, 9, 10, 15, 17, 18, 20, 21, 22 and 27 Township 57N, Range 84W Sheridan County, Wyoming. The Brook Mine is located approximately 6 miles Northwest of Sheridan, Wyoming. This area can be found on the Acme and Monarch USGS quadrangle maps. The proposed operation is scheduled to begin July 2017 and is estimated to continue until 2032. The land, after mining, will be returned to a grazing land use. Information regarding the proposed mining operation and reclamation procedures may be reviewed in the Office of the Land Quality Division of the Department of Environmental Quality in Cheyenne and Sheridan, Wyoming, the office of RAMACO in Sheridan, WY, or the Sheridan County Clerk's Office Sheridan, Wyoming. Written objections to the proposed mining operation must be received by the Administrator of the Land Quality Division, Department of Environmental Quality, 200 W. 17th Street, Cheyenne, WY 82002, before the close of business January 27, 2017. The Director may hold an informal conference if requested, hear the complaint and take action on the application in accordance with the Department's Rules of Practice and Procedure. The complainants shall have a right of appeal to the Environmental Quality Council where the

complaint will be heard a second time. A conference shall be held if the Director determines that the nature of the complaint or the position of the complainants indicates that an attempt to informally resolve the disputes is preferable to a contested case proceeding. An informal conference or a public hearing shall be held within twenty (20) days after the final date for filing objections unless a different period is stipulated to by the parties. The Council or Director shall publish notice of the time, date and location of the hearing or conference in a newspaper of general circulation in the locality of the proposed operation once a week for two (2) consecutive weeks immediately prior to the hearing or conference. The hearing would be conducted as a contested case in accordance with the Wyoming Administrative Procedure Act (W.S. §16-3-101 through §16-3-115), and the right of judicial review would be afforded as provided in that act. All parties as given in W.S. §35-11-406(j) will be mailed a copy of this notice. The Wyoming Oil and Gas Commission will be mailed a copy of the application mine plan map as required by W.S. §35-11-406(j).

Please note that the Wyoming Department of Environmental Quality Cheyenne Office has moved.
The new address is:

200 West 17th Street
Cheyenne, WY 82002

stay connected:

unsubscribe | manage preferences | help

This email was sent to matthew.kunze@wyo.gov using GovDelivery, on behalf of: Wyoming Department of Environmental Quality · 122 West 25th St, Herschler Building · Cheyenne, WY 82002

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From:	Mark Rogaczewski
To:	Alan Edwards; andrew kuhlmann; BJ Kristiansen; Jennifer Mickle
Subject:	Fwd: Objection letter
Date:	Friday, January 13, 2017 7:22:13 AM
Attachments:	Objection Letter Brook Mining recd 1-12-17.pdf

Alan and Andrew,

Please see attached an objection letter to the RAMACO Brook Mine application received by LQD Cheyenne on January 12, 2017 from Mr. John Barbula of Ranchester, WY. LQD D3 will start an objection materials folder and hold all objection materials separate of the rest of the application/TFN materials. This will allow us to have quick known access to the objection materials to prepare for any future informal conferences or EQC hearings.

Thanks,
Mark
---------- Forwarded message ----------
From: **Jennifer Mickle** <jennifer.mickle@wyo.gov>
Date: Thu, Jan 12, 2017 at 3:59 PM
Subject: Objection letter
To: Mark Rogaczewski <mark.rogaczewski@wyo.gov>, BJ Kristiansen <bj.kristiansen@wyo.gov>, Kyle Wendtland <kyle.wendtland@wyo.gov>

Please see attached.

Thanks Jen

--
Jennifer Bjerke-Mickle
Records & Data Management Specialist
State of Wyoming
DEQ-Land Quality Division

Please note that my address has changed to:

200 W. 17th St., Suite 10-Lower Level
Cheyenne, WY 82002

jennifer.mickle@wyo.gov
Phone: 307-777-6532
Fax: 307-777-5864

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III

2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

1-8-17

Administrator of the Land Quality Division
Department of Environmental Quality
200 W. 17th Street
Cheyenne, WY 82002

WDEQ/LQD
JAN 12 2017
RECEIVED

To whom it may concern:

I am writing today to respectfully object to the proposed Brooks Mining Operation. As a land/home owner in the Kleenburn area, my property has been suffering from water depletion (made remarkably worse by the implemnation of the Coal Bed Meathane Operation). It has progressed to the point that my well went nearly completely dry. The new proposed Brooks Mining Operation would most certainly contribute further to the depleting water supply and the lowering well water tables. This would likely make it necessary for me to drill a new well with no guarantee that I would find water.

Furthermore, the proposed mining activity would decrease my family's quality of life and the property value of my home (especially if the water tables decrease to the point that my home has no running water at all). The vehicle and railroad traffic would certainly increase as well, making my home and property worth less.

Finally, the dust and pollution would greatly affect my home and family due to mining activities such as blasting overburden and the coal mining activities involved.

Respectfully,

John Barbula

John Barbula
124 Kleenburn Rd.
Ranchester, Wyo. 82839

From:	Alan Edwards
To:	Mark Rogaczewski
Cc:	andrew kuhlmann; BJ Kristiansen; Jennifer Mickle
Subject:	Re: Objection letter
Date:	Friday, January 13, 2017 7:46:18 AM

Thank you for organizing the folder. We can circle back and discuss status of the public review next week. Alan

On Fri, Jan 13, 2017 at 7:22 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:

> Alan and Andrew,
>
> Please see attached an objection letter to the RAMACO Brook Mine application received by LQD Cheyenne on January 12, 2017 from Mr. John Barbula of Ranchester, WY. LQD D3 will start an objection materials folder and hold all objection materials separate of the rest of the application/TFN materials. This will allow us to have quick known access to the objection materials to prepare for any future informal conferences or EQC hearings.
>
> Thanks,
> Mark
> ---------- Forwarded message ----------
> From: **Jennifer Mickle** <jennifer.mickle@wyo.gov>
> Date: Thu, Jan 12, 2017 at 3:59 PM
> Subject: Objection letter
> To: Mark Rogaczewski <mark.rogaczewski@wyo.gov>, BJ Kristiansen <bj.kristiansen@wyo.gov>, Kyle Wendtland <kyle.wendtland@wyo.gov>
>
> Please see attached.
>
> Thanks Jen
>
> --
> **Jennifer Bjerke-Mickle**
> Records & Data Management Specialist
> State of Wyoming
> DEQ-Land Quality Division
>
> ***Please note that my address has changed to:***
>
> ***200 W. 17th St., Suite 10-Lower Level***
> ***Cheyenne, WY 82002***
>
> jennifer.mickle@wyo.gov
> Phone: 307-777-6532
> Fax: 307-777-5864
>
> E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Alan Edwards
Cc: andrew kuhlmann; BJ Kristiansen; Jennifer Mickle
Subject: Re: Objection letter
Date: Friday, January 13, 2017 7:57:52 AM

Sounds good. Have a nice weekend.

Mark

On Fri, Jan 13, 2017 at 7:46 AM, Alan Edwards <alan.edwards@wyo.gov> wrote:

> Thank you for organizing the folder. We can circle back and discuss status of the public review next week. Alan
>
> On Fri, Jan 13, 2017 at 7:22 AM, Mark Rogaczewski <mark.rogaczewski@wyo.gov> wrote:
>
> > Alan and Andrew,
> >
> > Please see attached an objection letter to the RAMACO Brook Mine application received by LQD Cheyenne on January 12, 2017 from Mr. John Barbula of Ranchester, WY. LQD D3 will start an objection materials folder and hold all objection materials separate of the rest of the application/TFN materials. This will allow us to have quick known access to the objection materials to prepare for any future informal conferences or EQC hearings.
> >
> > Thanks,
> > Mark
> > ---------- Forwarded message ----------
> > From: **Jennifer Mickle** <jennifer.mickle@wyo.gov>
> > Date: Thu, Jan 12, 2017 at 3:59 PM
> > Subject: Objection letter
> > To: Mark Rogaczewski <mark.rogaczewski@wyo.gov>, BJ Kristiansen <bj.kristiansen@wyo.gov>, Kyle Wendtland <kyle.wendtland@wyo.gov>
> >
> > Please see attached.
> >
> > Thanks Jen
> >
> > --
> > **Jennifer Bjerke-Mickle**
> > Records & Data Management Specialist
> > State of Wyoming
> > DEQ-Land Quality Division
> >
> > ***Please note that my address has changed to:***
> >
> > ***200 W. 17th St., Suite 10-Lower Level***
> > ***Cheyenne, WY 82002***
> >
> > jennifer.mickle@wyo.gov
> > Phone: 307-777-6532
> > Fax: 307-777-5864

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

--
Mark Rogaczewski
Supervisor
LQD District III
2100 West 5th Street
Sheridan, WY 82801
307-675-5616
mark.rogaczewski@wyo.gov

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records

Act and may be disclosed to third parties.

From:	Alan Edwards
To:	Mark Rogaczewski; BJ Kristiansen
Cc:	andrew kuhlmann
Subject:	Brook Mine
Date:	Wednesday, January 18, 2017 1:49:43 PM

I understand another letter has been received on the Brook Mine permit application. Please forward to Andrew and I for our information as well. Thank you. Alan

--

Alan Edwards
Deputy Director
Administrator, Abandoned Mine Lands
200 West 17th Street
Cheyenne, Wyoming 82002
Office: 307-777-7062
Alan.Edwards@wyo.gov

PLEASE NOTE CHANGE IN ADDRESS

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

From: Mark Rogaczewski
To: Alan Edwards; andrew kuhlmann; BJ Kristiansen
Subject: Fwd: mine letter of support - Invitation to edit
Date: Wednesday, January 18, 2017 2:42:35 PM

Alan and Andrew,

Latest letter received in LQD D3 should be attached.

Please call me if you have any questions.

Mark
---------- Forwarded message ----------
From: **Kyle Wendtland** <kyle.wendtland@wyo.gov>
Date: Wed, Jan 18, 2017 at 10:02 AM
Subject: Fwd: mine letter of support - Invitation to edit
To: Mark Rogaczewski <mark.rogaczewski@wyo.gov>, Carol Bilbrough <carol.bilbrough@wyo.gov>, Tammi Pusheck <tammi.pusheck1@wyo.gov>

All:

Please see the attached comments related to the proposed Ramaco mine in Sheridan County for the record.

Kyle
---------- Forwarded message ----------
From: **Marty Kobza (via Google Docs)** <drive-shares-noreply@google.com>
Date: Tue, Jan 17, 2017 at 3:25 PM
Subject: mine letter of support - Invitation to edit
To: kyle.wendtland@wyo.gov

Marty Kobza has invited you to **edit** the following document:

mine letter of support

Please see the comments from SCSD #1. If you have trouble accessing them, please let me know.

Open in Docs

Google Docs: Create and edit documents online.

Google Inc. 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA