



# 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 5, 2013

Mr. Andy MacClugage  
Mountain Cement Co.  
5 Sand Creek Road  
Laramie, WY 82070

**RE: TFN 5 1/110, A8 Amendment Application, Mountain Cement Co. (MCC),  
Third Round Technical Comments, Permit 298C**

Dear Mr. MacClugage:

On September 22, 2011, Land Quality Division (LQD) received the entire Mountain Cement Company (MCC) Amendment application. Prior to this date, only a partial application had been submitted. With the assistance of Aqua Terra Consultants, the application was reviewed. The first round technical review comments were sent to you under cover letter dated March 12, 2012. Responses to comments were received on October 15, 2012. Not all the comments were addressed in these responses. There were nine comments that had responses pending. You were notified by email on November 7, 2012 that the application remained technically deficient as not all the responses were received.

The Second Round Technical Comments were sent to you on December 13, 2012. MCC's responses to these comments were received on March 7, 2013. All pending responses were included with this submittal. The Third Round Technical Comments are attached to this letter. Please respond to the technical comments at your earliest convenience. The following comments require further response from MCC: 1a (note update of Form 1 acreage), 4f, 4h, 10a, 11b, 11e.i, and 11g. Please also note Comment 7 a and b. Jeff Brasher suggested that the LQD include a reminder related to these permit commitments to MCC with the Annual Report request. The LQD cannot modify the Annual Report reminder form letter specifically for MCC as requested. This form letter reminder is the same for all noncoal permit operators. It is MCC responsibility to ensure that all permit commitments are met. Also as a reminder, two of these comments were related to two old conditions. LQD is proposing to bring forward these conditions for attachment onto this Form 1 amendment approval: 1. standard condition on cultural resources, and 2. protection of plant species of special concern.

If you have any questions regarding this letter or our comments, please contact me at (307) 777-7052. You can also contact any of the reviewers directly for clarification.

Sincerely,

Lowell K. Spackman  
District I Permit Coordinator  
Land Quality Division

Attachment: comments

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
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## Round 3 Technical Review of Amendment A8 Permit Application

Permit No. 298C, TFN 5 1/110

The first round Technical Review addressed the Permit Amendment Application for Permit No. 298C submitted by Mountain Cement Company (MCC). The original comments were generated by Aqua Terra Consultants Inc. (ATC), with input from WDEQ/LQD. Original reviewers include Bob Giurgevich (BG) and Steve Stresky (SJS) of ATC, and Doug Emme (DE) of WDEQ/LQD. Lowell Spackman (LS) and Steve Ingle (SI) provided input during the review. MCC, WDEQ/LQD and Aqua Terra met on June 12, 2012 to discuss the comments before the contract with Aqua Terra expired on June 30, 2012. MCC provided responses to these comments on October 15, 2012. However, the text and map changes were not inserted until November 1, 2012. Second round comments were sent to MCC on December 13, 2012. Second round responses were received from MCC on March 7, 2013 with the responses inserted March 7, 2013.

The third round review of these responses was conducted by Lowell Spackman (LS), Steve Ingle (SI), and Craig Hults (CH). Below are follow-up comments to only those comments that required further responses from MCC. The following comments require further response from MCC: 1a (note Form 1 was updated), 4f, 4h, 10a, 11b, 11e.i, and 11g. Please also note Comment 7 a and b. Jeff Brasher suggested that the LQD include a reminder to MCC with the Annual Report request related to these permit commitments. The LQD will not modify the Annual Report reminder form letter specifically for MCC as requested. This form letter is the same for all noncoal permit operators. It is MCC responsibility to ensure that all permit commitments are met.

### Evaluation of Amendment A8 Permit Application for Permit No. 298C

#### 1. Adjudication File

##### a. Form 1

- i. Form 1 appears to contain all the information which is normally entered directly on the form. MCC must provide an adequate filing fee (Item 9). (BG)

(12/13/12) Response is conditionally acceptable. The form is acceptable with the exception of the permit figures. Permit acreage is off a whopping .31, Acreage to affect 89. The LQD can correct the values before approval. The \$2000 filing fee has been provided.(LS for DH)

(4/5/13) **The Form 1 was changed to reflect the acreages noted above.**(LS)

- b. The Adjudication File contains three WDEQ/LQD Form 8 documents, all signed by David Challacomb as President of Mountain Land & Cattle Co. (ML&CC).

- i. These three Form 8 documents do not appear to cover the entire surface owned by ML&CC as shown on Appendix AIX Map A1. Please verify that all surface owner consents are provided. (BG)

(12/13/12) Response is conditionally acceptable. MCC states that all surface owner consents have been provided, except as noted below for item 1.b.ii below.(LS)

(4/5/13) See the comment 1.b.ii for further discussion.(LS)

- ii. Map A1 appears to show BLM surface ownership in the W½ of Section 20, T15N, R72W, but the Adjudication File lacks a Form 8 signed by the BLM. Please include the BLM consent. (BG)

(12/13/12) Response is pending for the BLM consent. Comment remains unresolved. Also note that all Adjudication maps should show the location of the interstate in Sections 16 and 17 north of the amendment area.(LS)

(4/5/13) Response is acceptable. A letter from the BLM dated December 19, 2012 states that mining within the federal lands won't occur for 60 years, therefore a case file is not justified. MCC will need to adhere to BLM requirements before this land is mined.(LS)

- f. The Appendix C-1 materials are exclusive to the A8 amendment lands. The acreages on Form C agree with the total amendment acres on Form 1. However, some of the acres for entire sections (e.g., Sections 20, 21, 28, 29 and 33) total to values other than the standard 640 acres per section. Please explain these non-standard total acres per section. (BG)

(12/13/12) Response is not acceptable. Although some of the discrepancies have been corrected, there are sections that state all of the section is included in tabulation of lands that will be mined, however, not all of the 640 acres are listed. If all of the section is included, 640 acres should be listed. Please correct or explain this discrepancy in both Appendix C-1 and Appendix C-2.(LS)

(4/5/13) Response is acceptable. The information was collected from the Albany County Assessor's office. Not all sections are 640 acres.(LS)

## 2. Appendix DIX3

- a. Please included the cultural resource inventories (two separate reports?) for "... approximately 779 acres... within the 298C-A8 amendment area ..." as noted on page DIX3A-1. (BG)

(12/13/12) Response is not acceptable. Table 2, page DIX3A-2, lists 600 acres within Section 36 and it does not appear that Section 36 is within the 298C-A8 amendment area. Please clarify. Correspondence provided does not address acreage in Section 32 as listed in Table 2, page DIX3A-2. BLM acreage in Section 32 is not indicated on Permit# 298C-A8 amendment map. Inventories for the 779 acres should be provided. (CH)

(4/5/13) Response is acceptable.(CH)

- b. Appendix DIX3 appears to lack written documentation that this 779 acre cultural resource survey was reviewed by qualified federal agency personnel and/or the Wyoming State Historical Preservation Office (SHPO). Please provide the documentation. (BG)

(12/13/12) Response is not acceptable. Correspondence provided does not appear to address the 779 acres described above. Please clarify.(CH)

(4/5/13) Response is acceptable.(CH)

- c. Appendix DIX3 appears to lack the "... Class III cultural resource inventories ... needed on approximately 2400 acres within 12 disturbance areas ... R.72W." as noted in Section DIX3A.2 (Page DIX3A-2). Please clarify the information as necessary. (BG)

(12/13/12) Response is not acceptable. BLM acreage not indicated on map provided as noted in the response. Please provide summary reports or complete surveys for the 2400 acres within 12 disturbance areas.(CH)

(4/5/13) Response is acceptable.(CH)

- f. Section DIX3A.3 further states that a cultural resource consultant is preparing a "... draft programmatic agreement and historic preservation plan for ... 48AB543..." Appendix DIX3 lacks a copy of this document. Please provide written documentation of BLM review of and SHPO concurrence for the referenced agreement and plan. (BG)

(12/13/12) Response is not acceptable. Draft document has not been provided. Correspondence provided states that an MOA must be executed prior to disturbance. Please provide a copy of the signed MOA. (CH)

(4/5/13) **Response is conditionally acceptable.** The MOU is currently in progress. If the MOU is not completed by the time the application is technically complete, a condition will be placed on the Form 1 upon approval.(LS)

- g. (12/13/12) New Comment – Further response is needed. Appendix DIX3: The maps provided should indicate the survey areas to facilitate review. For example, in Section 19, disturbance area #7C, Site 48AB2380 is identified but there does not appear to be any correspondence which would indicate that site is not eligible for listing. In the alternative, the Class III reports should be provided to aid in review. Because only the covers of the reports have been provided in some instances, it is not possible to determine what acreage has been surveyed in relationship to the disturbance areas. (CH)

(4/5/13) Response is acceptable.(CH)

### 3. Appendix D5

- c. In the second paragraph of Page DIX5-6, it is mentioned that drilling was conducted in 2008. Should this state "In 2008 and 2010 Mountain Cement rigorously drilled ..."? If so, please also add a sentence referencing the drilling logs, such as "Drilling logs from the work conducted in 2010 are attached as Figure DIX5-55." (SJS)

(12/13/12) Response is not acceptable. The response states that several overburden samples will be analyzed for pH, conductivity and selenium. Please specify the sample density, such as one sample per pit will be analyzed for pH, conductivity and selenium. (SI/SJS)

(4/5/13) Response is acceptable. The overburden sample analyses were supplied.(SI)

### 4. Appendix D6

- d. Section DIX6-2.5: Prior discussions with WDEQ/LQD have involved potential commitments for surface water monitoring, although such monitoring has not been conducted to date. Based on the characterization of surface water in the permit area, monitoring would only be for ephemeral flow except for the lower portion of Government Gully. It is not clear how monitoring ephemeral flow in a baseline sense would be useful for evaluating impacts to surface water from mining. Monitoring may be useful, however, during mining to evaluate impacts from runoff and the efficacy of sediment control, which would be better addressed in the Mine Plan (Section MPVII-4.8.9). Additionally, monitoring ephemeral flow to evaluate reclamation success for erosion control may be warranted, although other means to achieve bond release may be more appropriate. These topics would be best addressed in consultation with WDEQ/LQD, which currently is a topic theme of Section DIX6-2.5.

It is recommended that Section DIX6-2.5 be revised to only commit to consulting with WDEQ/LQD regarding monitoring of ephemeral flow. A similar commitment to WDEQ/LQD consultation should be included to consider monitoring baseline conditions in Government Gully when mining is scheduled to commence in that area (Sequence Block #6). Alternatively, a resolution to this topic may be made in consultation with WDEQ/LQD that can be integrated into the permit application. (SJS)

(12/13/12) Response is not acceptable. Please remove the last sentence in Section DIX6- 2.5.(SI)

(4/5/13) Response is acceptable. The sentence has been removed as requested.(SI)

- e. Section DIX6-3.2.1.1:

2. Please include as a last paragraph a rough range of groundwater velocities based on the tabulated data in Table DIX6-1 and two generalized gradients, one for the majority of the permit area, and one for the area in the valley bottom west of the 7400-foot potentiometric contour shown on Map DIX6-2. These data could be added as two columns in Table DIX6-1, one for each gradient. Cast the results in feet per year. Include a reference in the footnotes for the basis of the porosities used in the calculations. The results will be useful in evaluating the timing related to potential impacts to groundwater down gradient of mining areas. (SJS)

(12/13/12) The response is pending. The comment remains unresolved.(SI)

(4/5/13) Response is acceptable. Table DIX6-1 has been corrected.(SI)

- h. Section DIX6-3.4: Although Mountain Cement has previously discussed a groundwater monitoring program, a more specific commitment to long-term monitoring must be included in the application. The proximity of the community wells to the amendment area and the CAPP, MCC must consult with the WDEQ/LQD to establish monitoring well locations. This consultation will consider current commitments for both baseline monitoring and monitoring as discussed in Section MPIX4.8.9 of the Mine Plan. (SJS and SI)

(12/13/12) Response is conditionally acceptable. MCC will consult with LQD to establish a groundwater monitoring program. MCC and the LQD should establish a timeline for developing this monitoring program.(SI)

**Response conditionally acceptable.** The response states: MCC will consult with LQD to establish a groundwater monitoring program. **MCC and the LQD should establish a timeframe for developing this monitoring program. Please contact Steve Ingle to discuss the timeframe for developing the monitoring program.**(SI)

I. Section DIX6-4.0:

1. The tabulation of surface water rights needs only to be completed for an area adjacent to the permit, which is a buffer of one-half mile. The tabulated data results in a large volume of information that is unnecessary. Additionally, there are numerous surface water sites both tabulated and on Map DIX6-5 that are beyond the one-mile buffer, although the tabulation and map indicate surface water rights within one mile. Please revise the text, Table DIX6-7 and Map DIX6-5 to include only surface water rights within one-half mile of the permit. Also, please correct the reference information at the bottom of the table that appears to be cut off in spreadsheet cells. Additionally, while plotting surface water rights to the nearest quarter-quarter is acceptable for locations outside of the permit, locations of these rights, whether existing or intended, should be well-known within the permit. Please move the locations on Map DIX6-5 to their actual or intended locations. Revise the legend entry to read "... to known or assumed locations within the permit, and to the nearest quarter-quarter outside of the permit." (SJS)

(12/13/12) Response is pending, therefore, the comment is unsolved.(SI)

(4/5/13) Response is acceptable. The Rules and Regulations and The Act do not specify how accurate the surface water rights locations need to be for on-permit areas.(SI)

- q. In Table DIX6-3, what is the analyte "S104"? Is this intended to be SiO4? If so, what is the relevance of this unusual analyte? Please correct or remove the column from the table. (SJS)

(12/13/12) Response is not acceptable. The table has not been corrected as requested. (SI)

(4/5/13) Response is acceptable. The analyte presented as "S104" has been corrected to SiO4.(SI)

- r. Please combine Tables DIX6-4 and DIX6-5 and identify these locations on Map DIX6-2 so they stand out. In Table DIX6-4:

1. HCO2 should be HCO3. (SJS)

Response is not acceptable. HCO2 has not been corrected to HCO3 as stated in the response.(SI)

(4/5/13) Response is acceptable. The analyte presented as "HCO<sub>2</sub>" has been corrected to HCO<sub>3</sub>.(SI)

2. Is N<sub>2</sub> as N correct? Typically these analytes are nitrate or nitrite, or these two combined. Please check and correct if necessary. (SJS)

(12/13/12) Response is not acceptable. The comment is correct the N<sub>2</sub> as N should be NO<sub>2</sub> as N. The response to the previous portion of this comment stated that the HCO<sub>2</sub> was corrected on the table. Please correct the N<sub>2</sub> as N to state NO<sub>2</sub> as N.(SI)

(4/5/13) Response is acceptable. The table has been corrected to state NO<sub>2</sub> as N.(SI)

In Table DIX6-5, please check that the TPH values are correct, or are detection limits. These data as cited indicate either that contamination is present, or that the sampling procedure is in serious question.(SJS)

(12/13/12) Response is not acceptable. Please review MCC's records regarding the TPH investigation.(SI)

(4/5/13) Response is acceptable. The TPH has been revised to remove the erroneous TPH values.(SI)

s. In Table DIX6-6:

1. Please specify in the footnotes the total well depth and Casper units that the wells are completed in.(SJS)

(12/13/12) Response is not acceptable. The well depth was included, but the comment also requested the unit within the Casper Fm. Please include the Casper unit in the footnote.(SI)

(4/5/13) Response is acceptable. The unit within the Casper Formation that the wells were completed in is unavailable or inconclusive.(SI)

2. Please add a groundwater elevation column, and specify in the footnotes how the measuring point elevation was determined or estimated.(SJS)

(12/13/12) Response is not acceptable. The groundwater level in this table is presented as feet "below ground surface" without the measuring point elevation this information is of limited usefulness. Please provide the measuring point elevation as a footnote for each well.(SI)

(4/5/13) Response is acceptable. A column has been added to the table to show the groundwater elevation as msl.(SI)

3. Please explain in the footnotes or in the text why radical rises in the water levels in MC-MW#1 and MC-MW#2 have occurred. Also specify the methodology for TPH in the footnotes. (SJS)

(12/13/12) Response is partially acceptable. The requested footnote has been added, but the sentence ends in the word "and" which implies that there is

additional information that was not included in the footnote. Please correct the footnote.(SI)

(4/5/13) Response is acceptable. The complete footnote text is now shown.(SI)

4. Please explain in the footnotes how a TPH detection occurred at MC-MW#1 (May 29, 2008). Unless the detection is due to sample handling or laboratory error, any detection signifies a contamination issue. Also explain the N/A entry. (SJS)

(12/13/12) Response is not acceptable. The comment has not been addressed. The comment states: Please explain in the footnotes how a TPH detection occurred at MC-MW#1 (May 29, 2008). Unless the detection is due to sample handling or laboratory error, any detection signifies a contamination issue. Also explain the N/A entry.(SI)

(4/5/13) Response is acceptable. Footnote b discusses the TPH detection in Well MC-MW#1.(SI)

t. Map DIX6-2:

1. The lithologic descriptions for the Stratigraphic Column are unreadable. Because this appears to be an image, it may be easier to strike this graphic, leaving the Hydrogeologic Column below as more pertinent information. Otherwise, please either remove the lithologic descriptions or revise to make readable. (SJS)

The Generalized Ground Water Flow diagram appears to yield useful information regarding the regional hydrogeologic conditions. However, very little of the graphic is readable. Please revise or remove from the map. (SJS)

(4/5/13) Response is acceptable. The stratigraphic column and the groundwater flow diagram are now legible.(SI)

2. Please use a different color for the four wells currently used to monitoring groundwater, so that they stand out among the other wells posted from SEO information. This revision is necessary for clarity to be able to easily identify monitoring locations. (SJS)

(4/5/13) Response is acceptable. The monitor well symbol has been changed and the wells can be identified.(SI)

3. The SEO permit numbers are very difficult to read because of the color. Please use a different color to make the text stand out better. (SJS)

(4/5/13) Response is acceptable. The color of the SEO permit numbers has been changed, so they are more readable.(SI)

4. Please add the spring symbol to the water right associated with the spring in Government Gulley, and add a corresponding legend entry. (SJS)



(12/13/12) Responses is not acceptable. The comments have not been addressed.(SI)

(4/5/13) Response is acceptable. The spring symbol has been added to the legend.(SI)

5. The usefulness 75-foot line for the Satanka Shale is not clear. Please discuss the relevance in the text (is this where the entire Casper Formation is assumed confined?) or remove from the map. (SJS)

(4/5/13) Response is acceptable. The comment requested that the relevance of the 75-foot line for the Satanka Shale be explained in the text or removed from the map. MCC has removed the 75-foot line from the map.(SI)

6. Please identify the Pope Springs and Soldier Springs well fields with a different color so that they stand out clearly among the wells on the map. Acknowledging that the wells are located to the nearest quarter-quarter, it would be more appropriate to move these wells to their actual location to coincide with the well field protection zones shown on the map. Also add a legend entry for the well field protection zones. (SJS)

(12/13/12) Responses are pending for Comment 7t 1-7. Therefore, they remain unresolved.(SI)

(4/5/13) Response is acceptable. The Pope Springs and Soldier Springs well fields are clearly identified on the map.(SI)

3. Map DIX6-3 repeats the same information as that on Map DIX6-2 and can therefore be excluded. Please move the appropriate legend entries to Map DIX6-2, and rename Map DIX6-4 accordingly. (SJS)

(12/13/12) Responses are pending therefore, the comment remains unresolved.(SI)

(4/5/13) Response is acceptable. Map DIX6-3 and DIX6-4 have been edited as requested.(SI)

#### 4. Appendix DIX7

- a. The text and Map DIX7-1 present standard NRCS soil map units and map unit descriptions for the entire current permit area plus the A8 amendment lands. This presentation does not show a disturbed map unit for active mining areas or reclaimed mining areas. The disturbed/reclaimed areas appear to be available from the vegetation mapping in Appendix DIX-8. MCC should transfer the Appendix DIX-8 disturbed/reclaimed polygons to Map DIX7-1 in order to create a more realistic, current distribution of soil map units for the entire permit area. (BG)

(12/13/12) Response remains outstanding. Further response is pending.(LS)

(4/5/13) Response is acceptable. Map DIX7-1 has been updated as requested.(LS)

- b. Lowell Spackman's e-mail of May 10, 2011 to Andy MacClugage declares that soil samples should be analyzed for depth, pH, coarse fragments, particle size, texture,

organic matter, saturation percent, conductivity and selenium. Appendix DIX7 presents no soil sample sites and no qualitative soil data. Based upon the soil map units presented in Appendix DIX7, MCC should refer to WDEQ/LQD Guideline 1 for recommended soil sampling procedures and address the following:

- i. The soil map units which should be sampled to provide minimum verification of salvageable soil depth. (BG)
- ii. The soil map units which should be sampled to provide minimum verification of soil map unit boundaries. (BG)
- iii. The number of soil samples per specific soil map units that will be taken and analyzed for the parameters specified above. (BG)
- iv. The text of Appendix DIX7 should be revised to incorporate data from and interpretation of the testing required above. (BG)

(12/13/12) Responses remain outstanding. Further responses are pending.(LS)

(4/5/13) Responses are acceptable. The requested changes to Appendix DIX7 have been made.(LS)

- c. Table DIX7-1 presents "Max Salvage Depth of Topsoil (in)" which ranges from zero to 60 inches across the soil map units. The majority of the projected maximum salvage depths range from 20 to 60 inches. These depth projections seem extreme given the general descriptions of topography, geology and other limitations presented in various A8 amendment components. Based upon the results of the soil depth sampling requirements outlined in the previous comment, MCC should appropriately revise Table DIX7-1 and Table DIX7-2. (BG)

(12/13/12) Response remains outstanding. Further response is pending.(LS)

(4/5/13) Tables DIX7-1 and DIX7-2 have been updated to more accurately estimate the soil salvage depths. This effort is appreciated.(LS)

## 5. Appendix DIX-8

- a. The reviewer understands MCC's challenges in presenting the verification of the EXREFA concept. These challenges are expected when confronted with the distinct diversity of topography, elevation and soil types. The reviewer agrees with MCC's proposal in the last paragraph of Section DIX8.4.5 (Page DIX8-38) to use the REFA concept. If the REFA concept is accepted, MCC would minimally revise section DIX8.4.5 to retain the discussion of the EXREFA concept (i.e., all text until the last paragraph) and revise the last paragraph to present a commitment to resolve the location, nature and areal extent of each necessary REFA at least three months before the desired sampling season. (BG)

(12/13/12) Response is conditionally acceptable. The commitment was added to the second paragraph on page DIX8-38. However, how will MCC ensure that this commitment is completed as described.(LS)

(4/5/13) No further response is necessary. The LQD will not be able to modify the Annual Report reminder letter specifically for MCC as requested. This form letter is the same for all noncoal permit operators. It is MCC responsibility to ensure that all permit commitments are met. Therefore, all appropriate MCC staff members must be aware of these types of permit commitments. Appropriate action will be taken for failure to meet any of MCC's permit commitment.(LS)

- b. Given the continued onslaught of the beetle-kill phalanx, the live tree density and distribution data only represent the actual sample period; the data are invalid for establishing actual tree replacement performance standards. WDEQ/LQD offers MCC the option to add text to section DIX8.4.6 which establishes an option to conduct total, live tree counts (by species) immediately prior to the initial disturbance of a new pit cut or a new pit sequence. The counts would be tracked cumulatively by disturbance unit in each Annual Report. These live tree counts form the basis for specific tree replacement numbers and species. (BG)

(12/13/12) Response is conditionally acceptable. The commitment was added to the second paragraph on page DIX8-38. However, how will MCC ensure that this commitment is complemented as described.(LS)

(4/5/13) No further response is necessary. The LQD will not be able to modify the Annual Report reminder letter specifically for MCC as requested. This form letter is the same for all noncoal permit operators. It is MCC responsibility to ensure that all permit commitments are met. Therefore, all appropriate MCC staff members must be aware of these types of permit commitments. Appropriate action will be taken for failure to meet any of MCC's permit commitment.(LS)

## 9. Appendix DIX10

Appendix DIX10 is well written; it contains appropriate historical correspondence with the Army Corps of Engineers (ACE) and contains a quality Map DIX10-1. The 2010 wetland survey of the A8 amendment area identified five potential jurisdictional wetlands. Appendix DIX10 commits MCC to seeking an ACE jurisdictional determination on a pit-by-pit basis. MCC should restate this commitment in the Mine Plan. (BG)

(12/13/12) Response is conditionally acceptable. The commitment was added to the Mine Plan Section MPIX-4.8. However, how will MCC ensure that this commitment is met as mining progresses?(LS)

(4/5/13) No further response is necessary. The LQD will not be able to modify the Annual Report reminder letter specifically for MCC as requested. This form letter is the same for all noncoal permit operators. It is MCC responsibility to ensure that all permit commitments are met. Therefore, all appropriate MCC staff members must be aware of these types of permit commitments. Appropriate action will be taken for failure to meet any of MCC's permit commitment.(LS)

## 10. Mine Plan

- a. Section MPIX-3.2 discusses haul and access roads but the Mine Plan does not include a map which names Mountain Air Lane, Howe Lane or North Piper haul road. The Mine Plan should contain a quality, properly scaled map which shows the name and location of these roads. Map DIX10-1 would be a good candidate to adopt for this purpose because of its high quality aerial photo base. (BG)

(12/13/12) Response remains outstanding. Further response is pending. NOTE that all Mine and Reclamation Maps must show Area "C" with in the currently approved 298C Permit Area. The thick purple line cuts across the section boundaries instead of outlining Area "C".(LS)

(4/5/13) **Response is not acceptable.** Map MPIX-1 shows the location of the haulroads listed in the comment, but they are not named. Placing the names of the haulroads on the map was a suggestion and not required. No further response necessary on this portion of the comment. However, **MCC has stated they will not to mine the northern half of "Area C" (as agreed in the Stipulated Agreement w/ Brian Waitkus). This area still shows a disturbance area. This mining block must be removed from Maps MPIX-1 and MPIX-2.**(LS)

- g. Map MPIX-1 contains a significant quantity of important Mine Plan information. The map size is too small (11" X 17") and much crucial detail is lost. Please revise Map MPIX-1 to a larger format (at least 36" X 36"). (BG)

(12/13/12) Response is conditionally acceptable. Although the map size was increased, the location of Interstate 80 is not clearly shown on the map within Sections 16 and 17 to the north of the amendment area. All mine and reclamation plan maps should clearly show the location of I-80.(LS)

(4/5/13) Response is acceptable. The interstate highway is shown on the maps.(LS)

- j. Page MPIX-11 (Section MPIX-4.4) references Chapter IV and the 1989 Coal R&R. This text should be corrected to reference "Chapter 6 of the most current WDEQ/LQD Coal R&R". (DE/BG)

(12/13/12) Response is not acceptable. The requested change was not made as stated.(LS)

(4/5/13) Response is acceptable. The rule citation has been corrected.(LS)

## 11. Reclamation Plan

- a. Section RPIX-2.0 fails to define the ASCM acronym. The section also provides no technical criteria for choosing the type and size and materials for each ASCM. The section contains a brief discussion of erosion control blankets, geotextiles and hydromulches. Please number and present a separate Erosion And Sedimentation Control section which:

- i. Defines each type of structure or material that will be used.
- ii. Outlines criteria for deciding when and where each type of structure may be used.

- iii. Outlines standard procedures for sizing and determining the materials (e.g., riprap size and type) which will be used for each structure.
- iv. The acronym ASCM (Alternative Sediment Control Measures) does not directly apply to the MCC operation. A general discussion of erosion and sedimentation control practices is more appropriate. (BG)

(12/13/12) Responses are conditionally acceptable. The information requested was included in Section RP-2.1, however, the subtitle in the Table of Contents needs to be changed. Please check to ensure that all pages listed in the TOC match the actually page numbers found in the permit.(LS)

(4/5/13) Response is acceptable. The Table of Contents was corrected.(LS)

- b. Section RPIX-2.0 must more fully address the performance standards of WDEQ/LQD Noncoal R&R Chapter 3, Section 2(b)(ii)(A). The section should generally identify criteria which MCC will use to determine that the entire highwall can be reduced (to a defined maximum slope) in order to blend with backfilled lands. MCC should detail stabilization, terracing, rubble zones, or other engineering techniques for locations where the final pit walls may not be fully reduced and left as a full or partial highwall. (BG)

(12/13/12) Response is not acceptable. Chapter 3, Section 2(b)(ii)(A) requires details in the approved Reclamation Plan. It is not sufficient to state that "Decisions regarding details and location of partially reduced highwalls as permanent reclamation will be done in consultation with the DEQ/LQD and the WGFD." The details outlining the configuration and locations of these features must be included in this application before approval.(LS)

**(4/5/13) Response is conditionally acceptable.** Much more detail has been added to the sections describing leaving highwalls as permanent features. However, MCC states that "If LQD wishes, MCC will seek approval of a Non-significant Revision (NSR) to the mining permit before leaving an unreduced highwall." **The LQD will require NSR's for any unreduced highwall proposal. The design (length, height, bench height, and any rubble zones used to break up the highwall), stability, public access and safety will need to be addressed for each highwall segment to be left. All highwalls may need to be broken up by vertical rubble zones if the highwalls are more than 50 ft. long or 20 ft. thick. Please include a commitment for LQD approval of a NSR before leaving any highwalls in the post-mining topography.**(LS)

- e. MCC presents haul road reclamation practices in Section RPIX-7.0. MCC should expand this discussion to include:
  - i. Presentation of a Reclamation Plan map location of, dimensions (top width, ditch depth and width, etc.) for and surfacing materials for each postmining road on MCC's private surface. (BG)

(12/13/12) Response is partially acceptable. Howe Lane, Mountain Air Road, and North Piper Haul Road will be left in their current condition. Howe Lane and Mountain Air Road are residential roads.

However, there is a contradiction in Section RPIX-7.0. One paragraph states that the only haul roads that will be reclaimed are in the State Section. The next paragraph states that all other roads (other than the residential roads) within the permit area will be reclaimed and restored to the condition they were prior to mining. All roads not approved by the landowner for post-mining land use must be reclaimed. Please make necessary corrections.

(4/5/13) Response is acceptable. Section RPIX-7.0 has been corrected as requested.(LS)

In order for the any haul road including the North Piper Haul Road to be left for the landowner, a letter from the landowner approving that these road be left as currently constructed must be included in the permit before these roads can be left for their post-mining land use.(LS)

(4/5/13) **Response is conditionally acceptable.** The text on page RP-22 states that the royalty documentation for leaving Howe Road as-is is attached. An attachment could not be found. **Please provide the attachment and include a reference to the attachment location in the text on this page. Also, is this attachment related to Rich and Cindy Avery's approval to leave the North Piper Haul Road? If not, this approval is still needed.**(LS)

- g. Map RPIX-1 is an 11" x 17" sheet. The size/scale is minimally adequate to portray the "Post-Mine Topography." Please correct the following map components:
- i. The legend entry of "Current 298C Permit Boundary" is incorrectly associated with the entry for "Mining Sequence" units or "Proposed 298C-A8 Disturbance Areas" units as shown on Mine Plan maps. (BG)
  - ii. The legend entry for "Proposed Disturbance Areas" is incorrectly associated with the entry for "Current 298C Permit Boundary". (BG)
  - iii. The line width and color density for the "Proposed 298C Permit Boundary" as shown in the legend does not match the actual line width and color density shown in the body of the map. (BG)
  - iv. The contour interval should be listed. (BG)

(12/13/12) Responses are conditionally acceptable. The map was revised as requested. However, note that all Mine and Reclamation Maps must show Area "C" within the currently approved 298C Permit Area. The thick purple line crosses the section boundaries instead of outlining the Area "C" boundary. (LS)

(4/5/13) **Response is not acceptable.** MCC has stated they will not to mine the northern half of "Area C" (as agreed in the Stipulated Agreement w/ Brian Waitkus). This area still shows a disturbance area. This reclamation block must be removed from Maps RPIX-1, RPIX-2, and RPIX-3.(LS)

**12. New Comments from 13/13/12.** Further Responses are requested on Section RPIX-5.0 for Revegetation Practices. This section was revised in its entirety, requiring a new review by the LQD. Please respond to the following new comments:

- a. Page RP-IX-6: Suggestions for the MM seeding plan bulleted items – 1. Direct haul from an MM area to another MM area may help preserve the seed bank. 2. Also plug seedlings will likely be more successful than hand-thrown seed. 3. In addition, holding the correct soil moisture can be tricky; not too much moisture as fungi might affect the seed viability.(LS for RJ)

(4/5/13) Response is acceptable. Page RPIX-11 was updated.(LS)

- b. Table RPIX-2: The Alternate Scientific Name column isn't necessary; the most recent scientific name is acceptable. Also the ranges provided for the column "Lbs. PLS/Acre" with the parentheses are confusing. Consider removing the ranges and the parentheses.(LS for RJ)

(4/5/13) Response is acceptable. Table RPIX-2 was updated accordingly.(LS)

- c. Table RPIX-2: Consider removing *Hesperostipa comata*. Also remove *Calamovilfa longifolia* as it is best for sandy and fine shale; it may not work on limestone soils very well. Please consider adding Sheep fescue and Great Basin wildrye to the seed mix.(LS for RJ)

(4/5/13) Response is acceptable. MCC considered the suggestions. MCC removed the *Calamovilfa longifolia*, but made no other changes from this comment. These changes to the seed mix were recommendations. It is MCC's responsibility to seed an appropriate seed mix and have sustainable revegetation.(LS)

- d. Table RPIX-2 (continued): Consider adding *Liatris pynostachya*, *Liatris spicata*, *Machaeranthera bigelovii*, *Thermopsis divaricarpa*, and *Verbena hastata* to the seed mix. Also consider removing FAB *Onobrychis vicifolia* and replace *Atriplex canescens* with *Atriplex garneri*.(LS for RJ)

(4/5/13) Response is acceptable. MCC considered the suggestions. MCC made no changes to the seed as a result of this comment. These changes to the seed mix were recommendations. It is MCC's responsibility to seed an appropriate seed mix and have sustainable revegetation.(LS)

- e. Table RPIX-3: In the second sentence of Section RPIX-5.0 it is stated that there is "much greater variation in elevation, soils, and pre-mine vegetation". What is the extent of this variation? There doesn't seem to be a real difference between Tables RPIX-2 and RPIX-3. The difference in elevation would have to be extreme to be reflected in the seed mix, e.g. river valley to the top of a mountain. The same comments provided for the columns of Table RPIX-2 apply to this table. Furthermore, the nitrogen fixers, including FAB *Onobrychis viciifolia*, FAB *Vicia Americana*, and LIN *Linum perenne* should be removed as too much available N may be produced to give a competitive advantage to weeds such as cheatgrass.(LS for RJ)

(4/5/13) Response is acceptable.(LS)

Table RPIX-4: Same comments apply from the columns of Table RPIX-2 to the columns in this table. Consider removing *Achnatherum hymenoides*, *Hesperostipa comata*, and *Nassella viridula*. Species to add might include Idaho fescue, Rocky Mountain fescue, and Mountain muhly.(LS for RJ)

(4/5/13) Response is acceptable. MCC considered the suggestions. MCC only made a few of changes to the seed as a result of this comment. These changes to the seed mix were recommendations. It is MCC's responsibility to seed an appropriate seed mix and have sustainable revegetation.(LS)

- f. Table RPIX-4 (continued): Consider removing LIN *Linum perenne*, *Artemisia frigida*, and *Berberis repens*. Species to add might include *Thermopsis montanum*, Mountain lupine, Arrowleaf balsam root, Rocky Mountain maple, Snowbrush, and Antelope bitterbrush.(LS for RJ)

(4/5/13) Response is acceptable. MCC considered the suggestions. MCC only made a few of changes to the seed as a result of this comment. These changes to the seed mix were recommendations. It is MCC's responsibility to seed an appropriate seed mix and have sustainable revegetation.(LS)

- g. Page RPIX-12: A seeding depth of ¼ to ½ inch is too deep. An 1/8 inch is sufficient. The seeding rate should be doubled; remove the word approximate. Note that there are species in the tables that are recommended to be sown in the late summer rather than fall or spring.(LS for RJ)

(4/5/13) Response is acceptable. MCC considered the suggestions. MCC only made a few of changes as a result of this comment. These changes were recommendations. It is MCC's responsibility to seed an appropriate seed mix and have sustainable revegetation.(LS)

- h. Table RPIX-5: Consider removing *Onobrychis viciifolia*.(LS for RJ)

(4/5/13) Response is acceptable. MCC considered the suggestion. MCC did not make the change as a result of this comment. These change was a recommendation. It is MCC's responsibility to seed an appropriate seed mix and have sustainable revegetation.(LS)

- i. Page PRIX-13 - Tree replacements: Consider replacing the word "transplant" in the first sentence with "replacing". Third paragraph under Tree replacement methods – "plugs" should be "plug seedlings". In addition, a source of tree seedlings is the local NRCS offices. Suggest using a tree planting shovel in the last sentence of this paragraph. Also suggest adding a commitment to install windwalls from the NRCS to protect the seedlings from prevailing wind and shade them from the sun.(LS for RJ)

(4/5/13) Response is acceptable. MCC made appropriate changes to the text.(LS)

- j. Pages RPIX-14 and RPIX-15 – Tree Replacement Success Standards: Consider adding Douglas fir to the less important tree species. On page RPIX-15 at least two summers and two winters are necessary after planting at the time of bond release study.(LS for RJ)



(4/5/13) Response is acceptable. MCC made the appropriate changes to the text.(LS)

- k. Pages RPIX-16 and RPIX-17: The ideas on bond release parameters for MM don't seem necessary at this time. It is sufficient to state that MCC and LQD will negotiate tree and MM replacement standards.(LS for RJ)

(4/5/13) Response is acceptable. The information in question has been removed.(LS)

- l. Page RPIX-17 – "Desirable species" should be "desirable perennial species"(LS for RJ)

(4/5/13) Response is acceptable. The text has been changed.(LS)

### **Evaluation of Outstanding Conditions for Permit No. 298C**

The following comments address whether the outstanding conditions are addressed in the A8 amendment application.

- 1. Lowell K. Spackman letter of May 13, 2008 and Attachment No. 2 entitled "List of Outstanding Conditions...(attached to this review) (MCC)"

- b. May 6, 2003, Form 11 Revision

(12/13/12) Condition No. 4 for protection of plant species of special concern will be forwarded to the Amendment A8 Form 1. Response is conditionally acceptable. **Condition will be forwarded to A8 Amendment.**(LS)

- c. January 5, 1998, Form 11 Revision

- i. Mr. Spackman's document addresses the WDEQ/LQD's standard condition that details operator actions related to the discovery of previously unidentified cultural resources. The A8 amendment application does not directly address this condition. This condition will be forwarded to the new Form 11. (BG)

(12/13/12) Response is conditionally acceptable. As stated in the comment, this is a standard condition that will be brought forward on to the new Form 1. Condition will be forwarded to A8 Amendment. (LS)

### **Comments of Editorial or Recommended Nature**

The following comments are of an editorial nature, or have been recommended to clarify the application or make it more presentable. While not specifically required by Wyoming statutes or DEQ Rules and Regulations, it is recommended that MCC address these comments in order to make a high-quality permit application that will be easily readable and well-received by the public.

- 3. Appendix D5

- c. In Section DIX5.1, last sentence, "Topographical relief" should read "Topographic elevation," in reference to the range of elevations across the permit area. (SJS)

(12/13/12) Response is not acceptable. Not changed as stated.(LS)

(4/5/13) Response is acceptable. The error was corrected.(LS)