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Department of Environmental Quality

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL
STATE OF WYOMING**

IN RE BROOK MINE APPLICATION)
) **Docket 17-4802 (Consolidated)**
TFN 6 2-025)

DEPARTMENT OF ENVIRONMENTAL QUALITY'S
PREHEARING MEMORANDUM

The State of Wyoming, Department of Environmental Quality ("Department"), through its undersigned counsel, hereby files this prehearing memorandum.

JURISDICTION

The Wyoming Environmental Quality Council ("Council") has jurisdiction over this matter under Wyoming Statute § 35-11-406(k) and (p). Under that statute, the Council may, when requested, hold a contested case hearing to make findings of fact and a decision on interested persons' objections to a proposed mining permit application that the Department has deemed complete, technically adequate, and suitable for publication and public comment. *See* Wyo. Stat. Ann. § 35-11-406(h)-(k), (p).

GENERAL NATURE OF THE CASE

The purpose of this case is to hear objections filed against the pending surface coal mining permit application filed for the proposed Brook Mine located near Sheridan, Wyoming. The three parties objecting to the application, Big Horn Coal Company, Powder River Basin Resource Council, and Mary Brezik-Fisher and David Fisher, claim that the proposed permit application is not technically adequate and does not meet the application requirements under the Department's statutes and regulations. In contrast, the applicant, Brook Mining Company, LLC, and the Department claim that, notwithstanding the objections, the permit application (with a few small modifications) is complete, technically adequate, and ready for the Director to make the findings necessary to issue or deny the permit.

ISSUE BEFORE THE COUNCIL

The sole issue before the Council is whether the proposed permit application for the Brook Mine meets regulatory requirements and is technically adequate despite the objections, or whether the objections reveal deficiencies or small technical problems with the application. Deficiencies or small technical problems may warrant correction through changes to the application or permit conditions requiring a prompt revision.

The purpose of this contested case hearing is for the Council to hear the objections to the proposed Brook Mine permit application and to resolve those objections. *See* Wyo. Stat. Ann. § 35-11-406(k). Contrary to various statements made by the other parties in earlier proceedings related to this case, the Council's role through this hearing is not to decide to issue or deny the requested permit based upon the objections. The relevant statute places the responsibility for that final agency action with the Director. Wyo. Stat. Ann. § 35-11-406(p). Instead, the Council serves the critical role of considering evidence offered in support of or against the objections, and then

issuing findings and a decision on whether the permit application is technically adequate in light of those objections. *See* Wyo. Stat. Ann. § 35-11-406(h), (k), and (p).

Prior to this point in the mine permit application process, the Department thoroughly reviewed both the completeness and technical adequacy of the permit application. Wyo. Stat. Ann. § 35-11-406(e)-(f), (h). The Department measured the completeness and technical adequacy of the application against the requirements for surface coal mining applications found in the Department's controlling statutes and regulations. *See, e.g.,* Wyo. Stat. Ann. § 35-11-406(a)-(b); *Rules Wyo. Dep't of Envtl. Quality, Land Quality Div., Coal Rules* chs. 2, 3, and 12 (describing requirements and procedures for surface coal mining permit applications). The Department and the applicant exchanged several rounds of comments and responses during the technical review. Once the Department determined that the permit application was technically adequate, notice of the permit was published for public review and comment. Wyo. Stat. Ann. § 35-11-406(h). After publication, interested people submitted comments and objections regarding the application. Wyo. Stat. Ann. § 35-11-406(k).

The comment period that followed the Department's technical review is the public's opportunity to provide input in the permitting process. *See* Wyo. Stat. Ann. § 35-11-406(e)-(k), and (p). During that period, the public can submit objections to the application or new information for the Department to consider prior to a decision by the Director to issue or deny the requested permit. Wyo. Stat. Ann. § 35-11-406(k) and (p). Now that the parties in this case and other objectors have provided their input, decisions need to be made whether the objections reveal any "deficiencies" or small technical issues with the application.

The Wyoming Environmental Quality Act ("Act") specifically defines a "deficiency" to mean "an omission or lack of sufficient information serious enough to preclude correction or

compliance by stipulation in the approved permit to be issued by the [D]irector[.]” Wyo. Stat. Ann. § 35-11-103(e)(xxiv). Under the Act, when the public comment process identifies small technical problems with a permit application, the permit may be issued subject to permit conditions to correct the small problems, so long as those problems are not significant enough to constitute “deficiencies.” *See id.* Consequently, the Department has established a practice of correcting small technical problems through permit conditions that require an applicant to submit a permit revision application within a specific time after the permit is issued. This practice could be applied to the Brook Mine’s permit application, as well, if the Council identifies small technical problems and those problems warrant prompt correction.

Because the Director did not hold an informal conference in this matter, the Council has the opportunity to hear the objections, after which, “the [C]ouncil shall issue findings of fact and a decision on the application within sixty (60) days after the final hearing.” Wyo. Stat. Ann. § 35-11-406(p). After the Council makes its findings and decision, “The [D]irector shall issue or deny the permit no later than fifteen (15) days from receipt of any findings of fact and decision of the environmental quality council.” *Id.*

Because the Council’s findings and decision could affect the contents of the permit application, such as the terms of the mine and reclamation plans, the Department and the Director cannot make the prerequisite findings to issue a permit until after the Council completes its hearing process. *See* Wyo. Stat. Ann. § 35-11-406(n). These final findings include, for example, whether “[t]he proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area.” Wyo. Stat. Ann. § 35-11-406(n)(ii)-(iii). The final steps also include setting the required amount of reclamation bonding required for the first year of mining operations

and setting the amount of the surface protection bond, if one is required. Wyo. Stat. Ann. §§ 35-11-416 and -417.

Through this hearing, the Council will hear evidence on the objections and make findings and a decision regarding the technical adequacy of the proposed permit application in light of the objections and their associated new information. *See* Wyo. Stat. Ann. § 35-11-406(k), (p). Those findings and decision will then allow the Director to complete the final steps and determine whether to issue or deny the requested permit for the Brook Mine.

CONTESTED ISSUES OF LAW AND FACTS

The objections relate to many different subject areas and parts of the application. However, there is only one contested issue of law for this hearing: Is the Brook Mine permit application complete and technically adequate? Similarly, there is only one issue of contested facts: Does the Brook Mine permit application adequately consider the subject areas raised in the objections?

The evidence presented in this case will demonstrate that the Brook Mine permit application, with some modifications to correct small technical issues, adequately addresses the issues raised in the objections. The evidence presented will also demonstrate that the application is complete and technically adequate under the surface coal mine statutory and regulatory requirements.

To make its findings and decision on the objections, the Council should consider both the relevant portions of the application addressing the objections and the applicable regulatory requirements found in the Wyoming Statutes and the DEQ Land Quality Division's Coal Rules and Regulations ("Coal Rules"). To assist the Council in that effort, the Department has grouped the objections by category, below, and identified the relevant portions of the application and regulatory requirements governing those categories:

Air quality and dust concerns. The portion of the permit application related to air quality and dust concerns is the Mine Plan. The applicable statutory and regulatory application requirements are Wyoming Statute § 35-11-406(b)(xiii) and the Coal Rules: Chapter 2, Section 2(a)(v); and Chapter 4, Section 2(j)(ii) and 2(q).

Alluvial valley floors (“AVFs”). The portions of the permit application related to AVFs are Appendix D5, Appendix D11, the Mine Plan, and the Reclamation Plan. The Slater Creek AVFs memorandum and the Tongue River AVFs memorandum also support these portions of the application. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-415(b)(x) and the Coal Rules: Chapter 2, Section 4(a)(xv); Chapter 3, Section 2; Chapter 5, Section 3; and Chapter 12, Section 1(a)(i).

Blasting and ground vibrations. The portion of the permit application related to blasting and ground vibrations is the Mine Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b)(xiii), -406(b)(xvii), and -415(b)(xi) and the Coal Rules: Chapter 2, Section 5(a)(vii); and Chapter 6.

Cultural resources. The portions of the permit application related to cultural resources are Appendix D1, Appendix D2, Appendix D4, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are the Coal Rules: Chapter 2, Sections 4(a)(xvii)-(xviii) and 5(a)(xix).

Geologic data. The portion of the permit application related to geologic data is Appendix D5. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(a)(vii) and -406(b)(v) and the Coal Rules: Chapter 2, Sections 4(a)(vii), 4(a)(viii), 4(a)(ix), and 4(a)(x).

Identity and mining record of the applicant. The portion of the permit application related to the identity and mining record of the applicant is Volume I – Adjudication. The applicable statutory and regulatory application requirements are Wyoming Statute § 35-11-406(a)(xiv) and the Coal Rules Chapter 2, Sections 2(a)(i)-(ii); and Chapter 12, Sections 1(a)(viii), 1(a)(ix), 1(a)(xi), and 1(a)(xii).

Land uses. The portions of the permit application related to land uses are Volume II – Adjudication Exhibits, Appendix D1, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statute §§ 35-11-406(a)(vii) and -406(b)(i) and the Coal Rules: Chapter 2, Sections 4(a)(i)-(ii) and 6(b)(x); and Chapter 4, Sections 2(a) and 2(d).

Mine plan and design. The portions of the permit application related to the mine plan and design are the Mine Plan and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b) and -407 and the Coal Rules: Chapter 2, Section 5; Chapter 3; Chapter 4; Chapter 5; and Chapter 12, Section 1(a)(v).

Mine fires. The portions of the permit application related to mine fires are the Mine Plan, its Addendum MP-5, and the Reclamation Plan. The applicable statutory and regulatory

application requirements are Wyoming Statute § 35-11-406(b)(ix) and the Coal Rules: Chapter 2, Section 5(a)(iv); and Chapter 4, Section 2(c)(xii)(F) and Section 2(l).

Mine production and viability. The portions of the permit application related to the mine's anticipated production and its viability are the Mine Plan and the Reclamation Plan. The applicable statutory and regulatory application requirements are the Coal Rules: Chapter 2, Section 5(a).

Operations near historic mines. The portions of the permit application related to operations near historic mines are Volume II – Adjudication Exhibits, Appendix D1, Appendix D2, Appendix D5 and its Addendums D5-3 and D5-4, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statute § 35-11-406(a)(ix) and the Coal Rules: Chapter 2, Section 5(a)(xiii); and Chapter 4, Section 2(t).

Overlapping permits. The portions of the permit application related to overlapping permits are Volume II – Adjudication Exhibits, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are the Coal Rules: Chapter 2, Section 5(a)(xviii).

Protection of property and prevention of nuisances. The portions of the permit application related to the protection of property and prevention of nuisances are Volume I – Adjudication, Volume II – Adjudication Exhibits, Appendix D1, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(a)(ix), -406(a)(xiii), -406(b)(iv)-(v), -406(b)(xiii), -407, and -415(b)(xii) and the Coal Rules: Chapter 4, Sections 2(n) and 2(x); and Chapter 12, Section 1(a)(v)(E)-(F) and Section 2.

Reclamation bonding. The portion of the permit application related to reclamation bonding is the 2015 Proposed Brook Mine Bond Calculation. The applicable statutory and regulatory application requirement is Wyoming Statute § 35-11-406(b)(vi). Further, the Director has not yet set an initial reclamation bond amount for the first year of operations at the Brook Mine because the Council's final action may affect the content of the mine and reclamation plans and, therefore, the required amount of bonding. Reclamation bonding is subject to statutory and regulatory requirements: Wyoming Statutes §§ 35-11-410(c), -411, and -417 and the Coal Rules: Chapter 12, Section 2. Reclamation bonding is also calculated using the DEQ Land Quality Division's Guideline 12.

Reclamation requirements and methods. The portion of the permit application related to reclamation requirements and methods is the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b) and -407 and the Coal Rules: Chapter 2, Sections 5(a) and 6; and Chapter 4, Sections 2(b), 2(c), 2(k), and 2(m).

Roads. The portions of the permit application related to roads are the Mine Plan and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(a)(ix) and -406(b)(v) and the Coal Rules: Chapter 2, Section 5(a)(xvi); Chapter 4, Section 2(j); and Chapter 12, Section 1(a)(v)(D).

Safety. The portions of the permit application related to safety are the Mine Plan and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b)(ix), -406(b)(xiii), and -407 and the Coal Rules: Chapter 2, Sections 2(a)(v) and 5(a); and Chapter 4, Section 2(l).

Subsidence. The portions of the permit application related to subsidence are Appendix D5 and the Mine Plan and its Addendum MP-6. The applicable statutory and regulatory application requirements are Wyoming Statute § 35-11-406(a)(ix) and the Coal Rules: Chapter 2, Sections 4(a)(ix)(C), 5(a)(xiii), and 6(b)(ii); Chapter 4, Section 2(l)(C)-(D); Chapter 5, Section 6; and Chapter 7, Sections 1 and 2.

Surface owner consents. The portion of the permit application related to surface owner consents is Volume I – Adjudication. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(a)(ii) and -406(b)(xi)-(xii) and the Coal Rules: Chapter 2, Section 2(a)(iii).

Water – Cumulative Hydrologic Impact Assessment (“CHIA”). A CHIA is not part of the Brook Mine permit application and is not required to be. A CHIA is a separate document that the Department creates to allow the Director to make the findings under Wyoming Statute § 35-11-406(n)(iii). The Department has not yet finalized or issued a CHIA for the Brook Mine.

Water – Groundwater baseline information. The portions of the permit application related to groundwater information are Appendix D6, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(a)(vii), -406(b)(v), and -406(b)(xvi) and the Coal Rules: Chapter 2, Sections 4(a)(vii), 4(a)(viii), 4(a)(xii), and 4(a)(xiv); and Chapter 19, Section 2.

Water – Groundwater drawdown and contamination. The portions of the permit application related to groundwater drawdown and contamination are Appendix D6, the Mine Plan and its Addendum MP-3, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b)(viii), -415(x), and -415(xii) and the Coal Rules: Chapter 2, Sections 5(a)(ix), 5(a)(x), and 5(a)(xi).

Water – Groundwater modeling. The portions of the permit application related to groundwater modeling are Appendix D5, Appendix D6, and the Mine Plan and its Addendum MP-3. The applicable statutory and regulatory application requirements are Wyoming Statute § 35-11-406 and the Coal Rules: Chapter 2, Sections 5(a)(x)-(xi); and Chapter 19, Section 2.

Water – Groundwater monitoring. The portions of the permit application related to groundwater monitoring are Appendix D6, Appendix D11, the Mine Plan and its Addendums MP-1 through MP-3, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statute §§ 35-11-406(b)(viii) and -415(x) and the Coal Rules: Chapter 2, Sections 4(a)(ix)(H), 5(a)(ix), and 6(b)(vi); and Chapter 4, Sections 2(i), 2(l)(B), and 2(w).

Water – Groundwater quality. The portions of the permit application related to groundwater quality are the Appendix D5, Appendix D6, Appendix D10, Appendix D11, the Mine Plan and its Addendum MP-3, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b)(ix), -406(b)(xiii), -406(b)(xvi), -406(b)(xviii), and -415(b)(iv) and the Coal Rules: Chapter 2, Sections 5(a)(ix)-(xi); and Chapter 4, Sections 2(b), 2(e), 2(g), 2(h), 2(n), 2(r), and 2(w).

Water - Hydrologic control methods and impoundments. The portions of the permit application related to hydrologic control methods and impoundments are the Mine Plan and its Addendums MP-1 and MP-2, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b)(v), -406(b)(xiv), -406(b)(xv), -406(b)(xviii), -407, -415(b)(viii), and -415(b)(x) and the Coal Rules: Chapter 2, Sections 5(a), 6(b)(ii), 6(b)(v), and 6(b)(vi); and Chapter 4, Sections 2(b), 2(e), 2(f), 2(g), 2(j), 2(n), 2(r)(ii), and 2(w).

Water – Surface water baseline information. The portions of the permit application related to surface water information are Volume I – Adjudication, Volume II – Adjudication Exhibits, Appendix D4, Appendix D6, Appendix D10, Appendix D11, the Mine Plan and its Addendum MP-5 and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(a)(vii), -406(a)(ix), -406(b)(v), and -406(b)(xvi) and the Coal Rules: Chapter 2, Sections 2(a)(v), 4(a)(iii), 4(a)(vii), 4(a)(xi)(A)-(B), 4(a)(xii), and, 4(a)(xiv); and Chapter 19, Section 2.

Water – Surface water monitoring. The portions of the permit application related to surface water monitoring are Appendix D6, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b)(xviii), -415(b)(viii), and -415(b)(x) and the Coal Rules: Chapter 2, Sections 4(a)(ix)(H), 4(a)(xi)(C)-(D), 5(a)(ix) and 6(b)(vi); and Chapter 4, Sections 2(i) and 2(w).

Water – Surface water quality. The portions of the permit application related to surface water quality are Appendix D6, Appendix D11, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(b)(ix), -406(b)(xiii), -406(b)(xiv), -406(b)(xv), -406(b)(xviii), -415(b)(iv), -415(b)(viii), and -415(b)(x) and the Coal Rules: Chapter 2, Sections 5(a)(ix), 5(a)(x), and 5(a)(xi); and Chapter 4, Sections 2(b), 2(c), 2(e), 2(f), 2(g), 2(j), 2(n), 2(r), and 2(w); and Chapter 19, Section 2.

Water – Uses by the mine. The portions of the permit application related to water uses by the mine are the Mine Plan and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statute § 35-11-406(b)(xvi) and the Coal Rules: Chapter 2, Section 2(a)(v).

Water – Water rights. The portions of the permit application related to water rights are Volume I – Adjudication, Volume II – Adjudication Exhibits, Appendix D1, Appendix D6, Appendix D11, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(a)(vii) and -415(b)(xii) and the Coal Rules: Chapter 2, Sections 4(a)(ix)(E) and 4(a)(xiii); and Chapter 4, Section 2(w).

Wildlife. The portions of the permit application related to wildlife are Appendix D9, the Mine Plan, and the Reclamation Plan. The applicable statutory and regulatory application requirements are Wyoming Statutes §§ 35-11-406(a)(vii) and -406(b)(xiii) and the Coal Rules: Chapter 2, Sections 3(b), 4(a)(vi), 4(a)(ix), 5(a)(viii), 6(b)(vi); Chapter 4, Sections 2(d), 2(f), 2(j), 2(n), and 2(r); and Appendix B to the Coal Rules.


WITNESSES

The Department may call the witnesses identified in the Department's Witness List (attached hereto as Attachment A). The Department reserves the right to call any of the witnesses identified by any other party, or any additional witnesses necessary for foundation, impeachment, or rebuttal.

EXHIBITS

The Department's exhibits are identified in the Department's Exhibit List (attached hereto as Attachment B). This prehearing memorandum, the witness and exhibit lists, and the exhibits have been mailed to the parties prior to the hearing. The Department reserves the right to enlarge portions of these exhibits for use as demonstrative exhibits at the hearing. The Department also reserves the right to use at hearing any exhibits designated by any other party. The Department further reserves the right to designate additional exhibits as may become necessary for impeachment or rebuttal.

Dated this 17th day of May, 2017.



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CERTIFICATE OF SERVICE

I hereby certify that on the 7th day of May, 2017, a copy of the foregoing document with its attachments was served via the EQC electronic filing website on the following:

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Wyoming Attorney General's Office

ATTACHMENT A

**DEPARTMENT OF ENVIRONMENTAL QUALITY'S
WITNESS LIST**

The Department will call the following witnesses:

1. **Mr. Bjarne “Bj” Kristiansen, P.G.**, Assistant Supervisor, Land Quality Division District 3, Wyoming Department of Environmental Quality, 2100 West 5th Street, Sheridan, Wyoming 82801; (307) 673-9337.

Mr. Kristiansen may testify about his duties as an assistant district supervisor and a permit coordinator for the Department, and specifically his work on the Brook Mine surface coal mining permit application, TFN 6 2/025. He may testify generally about the procedures and processes involved with the Department reviewing applications for mining permits, the approval of surface coal mining permits, operators' annual reports, inspecting mine permits, drafting inspection reports, calculating bond amounts, setting bond amounts, or other related procedures. He also may testify regarding his knowledge, skill, experience, training, or education qualifying him as an expert regarding the review and processing of mining permit applications, geology, groundwater quantity, groundwater quality, field investigations and inspections, inspection reports, or bond determinations for mining permits including, but not limited to, the Brook Mine permit application. Additionally, he may testify about his knowledge, observations, and opinions regarding the Brook Mine permit application, the Department's review and processing of that application, the objections raised against that application through the public comment process, field investigations, interactions and communications with the applicant or their agents, the parties or their agents, other state agencies, and members of the public, or other aspects of or issues related to the Brook Mine permit application. He also may testify based upon his observations, actions, and expert opinions in support of the Department's review and processing of the Brook Mine permit application, the

Department's responses to the objections raised against that application through the public comment process, the Department's recommendations to the Environmental Quality Council ("Council"), or other aspects of the Brook Mine permit application. He may also rebut any expert opinions or evidence provided by the parties.

2. **Mr. Doug Emme**, Blasting Program Principal, Land Quality Division, Wyoming Department of Environmental Quality, 2100 West 5th Street, Sheridan, Wyoming 82801; (307) 673-9337.

Mr. Emme may testify about his duties as blasting program principal for the Department, and specifically his work on the Brook Mine surface coal mining permit application, TFN 6 2/025. Mr. Emme may testify generally about the procedures and processes involved with the Department reviewing applications for mining permits, the approval of surface coal mining permits, the Department's blasting program, calculating bond amounts, setting bond amounts, or other related procedures. He also may testify regarding his knowledge, skill, experience, training, or education qualifying him as an expert regarding mine blasting, the Department's blasting program, the review and processing of mining permit applications, or bond determinations including, but not limited to, the Brook Mine permit application. Additionally, he may testify about his knowledge, observations, and opinions regarding the Brook Mine permit application, the Department's review and processing of that application, the objections raised against that application through the public comment process, interactions and communications with the applicant or their agents, the parties or their agents, and members of the public, or other aspects of or issues related to the Brook Mine permit application. He also may testify based upon his observations, actions, and expert opinions in support of the Department's review and processing of the Brook Mine permit application, the Department's responses to the objections raised against that application through the public

comment process, and the Department's recommendations to the Council, or other aspects of the Brook Mine permit application. He may rebut any expert opinions or evidence provided by the parties.

3. Dr. Muthu Kuchanur, Ph.D., Geology Supervisor, Land Quality Division, Wyoming Department of Environmental Quality, 200 West 17th Street Cheyenne, Wyoming 82002; (307) 777-7937.

Dr. Kuchanur may testify about his duties as a geology supervisor for the Department, and specifically his work on the Brook Mine surface coal mining permit application, TFN 6 2/025. Dr. Kuchanur may testify generally about the procedures and processes involved with the Department reviewing water issues related to mining permit applications, the approval of surface coal mining permits, hydrologic modeling, or other related procedures. He also may testify regarding his knowledge, skill, experience, training, or education qualifying him as an expert regarding hydrologic modeling and the review of water issues, hydrology, water quantity, and water quality related to mining permit applications including, but not limited to, the Brook Mine permit application. Additionally, he may testify about his knowledge, observations, and opinions regarding the Brook Mine permit application, the Department's review and processing of that application, the objections raised against that application through the public comment process, interactions and communications with the applicant or their agents, other state agencies, the parties or their agents, and members of the public, or other aspects of or issues related to the Brook Mine permit application. He also may testify based upon his observations, actions, and expert opinions in support of the Department's review and processing of the Brook Mine permit application, the Department's responses to the objections raised against that application through the public comment process, the Department's recommendations to the Council, or other aspects of the Brook

Mine permit application. He may also rebut any expert opinions or evidence provided by the parties.

4. **Mr. Matt Kunze**, Surface Water Hydrologist, Land Quality Division, Wyoming Department of Environmental Quality, 200 West 17th Street Cheyenne, Wyoming 82002; (307) 777-7937.

Mr. Kunze may testify about his duties as a surface water hydrologist for the Department, and specifically his work on the Brook Mine surface coal mining permit application, TFN 6 2/025. Mr. Kunze may testify generally about the procedures and processes involved with the Department reviewing water issues related to applications for mining permit applications, the approval of surface coal mining permits, or other related procedures. He also may testify regarding his knowledge, skill, experience, training, or education qualifying him as an expert regarding the review of water issues, hydrology, water quantity, and water quality related to mining permit applications including, but not limited to, the Brook Mine permit application. Additionally, he may testify about his knowledge, observations, and opinions regarding the Brook Mine permit application, the Department's review and processing of that application, the objections raised against that application through the public comment process, interactions and communications with the applicant or their agents, other state agencies, the parties or their agents, and members of the public, or other aspects of or issues related to the Brook Mine permit application. He also may testify based upon his observations, actions, and expert opinions in support of the Department's review and processing of the Brook Mine permit application, the Department's responses to the objections raised against that application through the public comment process, and the Department's recommendations to the Council, or other aspects of the Brook Mine permit application. He may also rebut any expert opinions or evidence provided by the parties.

The Department may call the following witnesses:

5. **Mr. Alan Edwards**, Deputy Director of the Department and Administrator of the Abandoned Mine Lands Division, Wyoming Department of Environmental Quality, 200 West 17th Street Cheyenne, Wyoming 82002; (307) 777-7937.

Mr. Edwards may testify regarding his duties as deputy director of the Department and as acting administrator for the Land Quality Division's processing of the Brook Mine surface coal mining permit application, TFN 6 2/025. He may also testify regarding his involvement and knowledge relating to the permit application, the Department's review and processing of the application, objections raised against that application through the public comment process, interactions and communications with the applicant or their agents, the parties or their agents, and members of the public, or other aspects of or issues related to the Brook Mine permit application. He may also rebut any evidence provided by the parties.

6. **Mr. Mark Rogaczewski**, Supervisor, Land Quality Division District 3, Wyoming Department of Environmental Quality, 2100 West 5th Street, Sheridan, Wyoming 82801; (307) 673-9337.

Mr. Rogaczewski may testify regarding his duties as supervisor of District 3. He may also testify regarding his involvement and knowledge relating to the Brook Mine surface coal mining permit application, TFN 6 2/025, the Department's review and processing of the application, objections raised against that application through the public comment process, interactions and communications with the applicant or their agents, the parties or their agents, and members of the public, or other aspects of or issues related to the Brook Mine permit application. He may also rebut any evidence provided by the parties.

ATTACHMENT B

**DEPARTMENT OF ENVIRONMENTAL QUALITY'S
EXHIBIT LIST**

Ex. No.	Exhibit Date	Description	Pages	DEQ Bates Numbers
DEQ 1	NA	Permit Application, Volume I, Adjudication	552	DEQ 1-001 to 1-552
DEQ 2	1/27/2016	Permit Application, Volume IA, WDEQ/LQD Consent Documents	396	DEQ 2-001 to 2-396
DEQ 3	NA	Permit Application, Volume II, Adjudication Exhibits	17	DEQ 3-001 to 3-017
DEQ 4	NA	Permit Application, Volume III, Appendix D1 – Land Use Appendix D2 – History Appendix D3 – Archeological and Paleontological Resources Appendix D4 – Climatology	112	DEQ 4-001 to 4-041 4-042 to 4-064 4-065 to 4-075 4-076 to 4-112
DEQ 5	NA	Permit Application, Volume IV, Appendix D5 – Topography, Geology, and Overburden Assessment	295	DEQ 5-001 to 5-295
DEQ 6	NA	Permit Application, Volume V, Appendix D6 – Hydrology	553	DEQ 6-001 to 6-553
DEQ 7	NA	Permit Application, Volume VI, Appendix D7 – Soil Resources Assessment	114	DEQ 7-001 to 7-114
DEQ 8	NA	Permit Application, Volume VII, Appendix D8 – Vegetation Inventory	452	DEQ 8-001 to 8-452
DEQ 9	NA	Permit Application, Volume VIII, Appendix D9 – Wildlife	139	DEQ 9-001 to 9-139
DEQ 10	NA	Permit Application, Volume IX, Appendix D10 – Wetlands	279	DEQ 10-001 to 10-279
DEQ 11	NA	Permit Application, Volume X, Appendix D11 Alluvial Valley Floors	313	DEQ 11-001 to 11-313
DEQ 12	NA	Permit Application, Volume XI, Mine Plan	372	DEQ 12-001 to 12-372
DEQ 13	NA	Permit Application, Volume XII, Reclamation Plan	189	DEQ 13-001 to 13-189
DEQ 14	None	Resume of Bjarne “Bj” Kristiansen, P.G.	4	DEQ 14-001 to 14-004
DEQ 15	2/10/2016	Memorandum, <i>Brook Mine AVF Determination, Slater Creek</i> , by Bj Kristiansen, P.G.	13	DEQ 15-001 to 15-013
DEQ 16	2/10/2016	Memorandum, <i>Brook Mine AVF Determination, Tongue River</i> , by Bj Kristiansen, P.G.	2	DEQ 16-001 to 16-002

DEQ 17	None	OSMRE Subsidence Class Text, <i>Chapter 2: Mechanics of Subsidence</i> , by Kewal Kohli and Stefanie Self	16	DEQ 17-001 to 17-016
DEQ 18	None	OSMRE Subsidence Class Text, <i>Chapter 3: Principle Parameters of Subsidence</i> , by Kewal Kohli and Stefanie Self	17	DEQ 18-001 to 18-017
DEQ 19	2016	OSMRE Subsidence Class Text, <i>2016 Chapter 05, Subsidence Monitoring</i> , PowerPoint presentation	6	DEQ 19-001 to 19-006
DEQ 20	None	OSMRE Subsidence Class Text, <i>Chapter 8: Subsidence Prediction Methods</i> , by Kewal Kohli and Stefanie Self	6	DEQ 20-001 to 20-006
DEQ 21	None	Resume of Matt Kunze	2	DEQ 21-001 to 21-002
DEQ 22	May 2015	<i>Guideline No. 8, Hydrology-Coal and Non Coal</i> , Wyoming Department of Environmental Quality Land Quality Division, revised May 2015	69	DEQ 22-001 to 22-069
DEQ 23	Nov. 2003	<i>Guideline No. 13, Permitting of Sedimentation Ponds and Primary Sedimentation Control Structures and Process Water Ponds as Impoundments</i> , Wyoming Department of Environmental Quality Land Quality Division, revised November 2003	21	DEQ 23-001 to 23-021
DEQ 24	Jan. 2004	<i>Guideline No. 15, Alternative Sediment Control Measures, Coal</i> , Wyoming Department of Environmental Quality Land Quality Division, revised January 2004	10	DEQ 24-001 to 24-010
DEQ 25	Sept. 2010	<i>Goose Creek Watershed TMDLs Final</i> , prepared by SWCA Environmental Consultants for Wyoming Department of Environmental Quality	237	DEQ 25-001 to 25-237
DEQ 26	Sept. 2010	<i>Appendices to Goose Creek Watershed TMDLs Final</i> , prepared by SWCA Environmental Consultants for Wyoming Department of Environmental Quality	85	DEQ 26-001 to 26-085
DEQ 27	2/25/2016	<i>Wyoming's 2014 Integrated 305(b) and 303(d) Report</i> , prepared by Wyoming Department of Environmental Quality Water Quality Division, Document #16-0126, available at: http://deq.wyoming.gov/media/attachments/Water%20Quality/Water%20Quality%20Assessment/Reports/2014-Integrated-305b-and-303d-Report.pdf	186	DEQ 27-001 to 27-186
DEQ 28	2017	Curriculum Vitae of Muthu Kuchanur, Ph.D., P.E.	5	DEQ 28-001 to 28-005
DEQ 29	12/31/14	<i>Coal Annual Report Format</i> , Wyoming Department of Environmental Quality Land Quality Division, available at: http://deq.wyoming.gov/media/attachments/Land%20Quality/Coal/Annual%20Reports/CARF_Coal-Annual-Report-Format.pdf	30	DEQ 29-001 to 29-030
DEQ 30	None	Resume of Douglas Wayne Emme	5	DEQ 30-001 to 30-005

DEQ 31	Dec. 2015	<i>Brook Mine 2015 Bond December 2015</i> , prepared by WWC Engineering	16	DEQ 31-001 to 31-016
DEQ 32	11/2/2015	Map, <i>2015 Bond Topsoil Redistribution Areas</i> , prepared by WWC Engineering	1	DEQ 32-001
DEQ 33	Feb. 2017	<i>Guideline No. 12, Standardized Reclamation Performance Bond Format and Cost Calculation Methods</i> , Wyoming Department of Environmental Quality Land Quality Division, revised February 2017	52	DEQ 33-001 to 33-052
DEQ 34	Dec. 2015	<i>Brook Mine Permit Application December 2015</i> , Responses to 3rd Round Comments, prepared by WWC Engineering	239	DEQ 34-001 to 34-239
DEQ 35	12/1/2016	Letter from Bj Kristiansen to Randall Atkins, <i>Re: Brook Mine Coal Permit Application Technical Adequacy, TFN 6 2/025</i>	1	DEQ 35-001
DEQ 36	Various	ASTM standards on Environmental Site Characterization, Designation Nos. D-5447, D-5490, D-5609, D-5611, and D-5981	30	DEQ 36-001 to 36-030