



**ANSWER:**

LQD has not performed any geotechnical studies, but Brook Mine has. The studies and their results are listed Volume IV, Appendix D5, Addendum D5-5.

**INTERROGATORY NO. 2:** Identify the basis for a determination by DEQ that hydrologic studies and surface run-off studies demonstrate a scientific basis for the conclusion that the proposed Mine Plan for Brook Mine does not present a risk of degradation to surface and subsurface water quality and quantity or a risk of adverse effects to the cumulative hydrological balance and how the current Mine Plan sets forth specific and mandatory requirements which dictate how the operator is obligated to respond in the event of hydrological problems or water quality or quantity degradation are encountered. Your answer should include the name, address, and telephone number of all individuals or companies which DEQ is aware of that conducted hydrological or water studies for the purpose of investigating the hydrological and water conditions and risks posed by the mining activities in the area where Brook Mine proposes to conduct mining activities, whether the DEQ has conducted its own studies and the DEQ's basis for relying on any studies submitted by Brook Mine.

**ANSWER:**

The basis for a determination by LQD that the proposed Brook Mine does not present a risk of degradation to surface and subsurface water quality and quantity is found in the various sections of the permit application, including:

- (1) Appendix D6-Hydrology
- (2) Mine Plan Section MP.1 General Description of Mining Operations
- (3) Mine Plan Section MP.4 Mining Methods, Schedules, and Assessments
- (4) Mine Plan Section MP.5 Mining Hydrology
- (5) Mine Plan Section MP.6 Probable Hydrologic Impacts
- (6) Mine Plan Section MP.7 Operational Monitoring Program
- (7) Mine Plan Section MP.8 Water Use
- (8) Reclamation Plan Section RP.4 Spoil Replacement
- (9) Reclamation Plan Section RP.5 Topsoil Replacement
- (10) Reclamation Plan Section RP.8 Final Hydrologic Restoration

Sections of the Mine Plan and Reclamation Plan of the Brook Mine permit application set requirements which dictate how the operator will be obligated to respond in the event that hydrological problems or water quality or quantity degradation are encountered:

- (1) Mine Plan Section MP.6 Probable Hydrologic Impacts
- (2) Mine Plan Section MP.7 Operational Monitoring Program
- (3) Reclamation Plan Section RP.8 Final Hydrologic Restoration

The hydrological or water studies for the Brook Mine permit application were conducted by staff at WWC Engineering, 1849 Terra Ave., Sheridan, WY 82801, 307-672-0761. WWC Engineering also used an accredited and certified laboratory, Intermountain Labs (IML), 1673

Terra Avenue, Sheridan, WY 82801, 307-672-8945, to produce analytical results for all surface and groundwater samples.

With the exception of the alluvial valley floor (AVF) determination for Slater Creek within the permit boundary, the LQD did not conduct its own studies involving collection of field data; all studies were conducted by the Brook Mine and its consultants. The LQD is in the deliberative process of drafting a cumulative hydrologic impact assessment (CHIA) that will assess the potential for material damage to the hydrologic balance outside the proposed mine permit boundary and has not made decisions regarding the CHIA findings. Drafts of the CHIA are covered by the deliberative process privilege.

The basis for relying on studies submitted by the Brook Mine is that the permit application has gone through several rounds of technical review and the LQD has determined that the permit application is technically complete.

**INTERROGATORY NO. 3:** Identify the name of all DEQ personnel (in the Sheridan office, Cheyenne office, Lander office and elsewhere) involved in assessing and evaluating the Brook Mine Permit that is the subject of this contested case hearing. In relation to each person identified, describe which office the person works in, their job title, the particular aspect of evaluation or the tasks undertaken by that individual, and the nature of each individual’s input in the permitting process.

**ANSWER:**

The DEQ personnel who were involved in assessing and evaluating the Brook Mine permit application are listed below, along with their offices, job titles, and the aspects of the application that they worked on. The nature of their input is found in the permit application itself, and in the comments provided on the permit application through the review process.

<b>Name</b>	<b>Office</b>	<b>Title</b>	<b>Worked on:</b>
David Schellinger	Sheridan	Natural Resources Analyst	Soils, OB
David Myers	Sheridan	Natural Resources Analyst	Surface water, wildlife
Deanna Hill	Cheyenne	Senior Admin. staff	Adjudication, AVS
Muthu Kuchanur	Cheyenne	Geologist Supervisor	Hydrology, CHIA
Matt Kunze	Cheyenne	Natural Resource Program Principal	Surface water CHIA
Kim Medina	Sheridan	Project Geologist	Geology
Jaime Jakes	Sheridan	Natural Resource Program Principal	Vegetation
Doug Emme	Sheridan	Natural Resource Program Principal	Blasting, Bond
Bj Kristiansen	Sheridan	Natural Resource Program Principal	Permit Coordinator
Mark Rogaczewski	Sheridan	District 3 Supervisor	History, Land Use

Stacey Page	Sheridan	Natural Resource Program Principal	Vegetation, Reclamation Plan
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**INTERROGATORY NO. 4:** Identify the amount of the reclamation/performance bond which DEQ will require for the Brook Mine project, how the amount of the bond was calculated and what information was considered in determining the bond amount. Your answer should also include the identification of any information or sources relied upon in calculating or determining the amount of the reclamation bond.

**ANSWER:**

DEQ has not yet calculated the reclamation bond amount that would be required for the Brook Mine.

When DEQ calculates the bond amount, DEQ staff will use the LQD Guideline 12 – Standardized Reclamation Performance Bond Format and Cost Calculation Methods. A copy of the current Guideline 12 is being produced and is also available on the DEQ website at: <http://deq.wyoming.gov/lqd/resources/guidelines/>

**INTERROGATORY NO. 5:** If reclamation costs exceed the figure you list in your answer to interrogatory no. 4 above, identify with specificity the individuals, companies, state and local agencies, or any other entities who will be responsible for all additional costs and expenses associated with reclamation exceeding the amount of the established bond and what investigation DEQ has undertaken to confirm that any such entity is capable of satisfying any additional reclamation or remediation expenses pertaining to the mining operations of Brook Mining Company, LLC in Sheridan County.

**ANSWER:**

DEQ has not yet calculated the reclamation bond amount that would be required for the Brook Mine. Therefore, Brook Mine has not yet provided a bond instrument to LQD, which LQD will need to approve.

Wyoming Statute § 35-11-422 provides that, “If the forfeited bond is inadequate to cover the costs of the final reclamation program, the attorney general shall bring suit to recover the cost of the reclamation where recovery is deemed possible.”

**INTERROGATORY NO. 6:** Identify with particularity the precise documents or information DEQ relied upon in determining that material damage to the hydrologic balance outside the proposed permit area for the Brook Mine would be prevented. If DEQ has not made this determination, please state that fact.

**ANSWER:**

DEQ has not yet made a determination that material damage to the hydrologic balance outside the proposed permit area for the Brook Mine would be prevented.

**INTERROGATORY NO. 7:** Identify with particularity the precise documents or information DEQ relied upon in determining that both the quantity and quality of water in both the

surface and underground water systems that supply the alluvial valley floor of the Tongue River Valley in the area of the Brook Mine would not be materially damaged by the mining and associated activities. If DEQ has not made these determinations, please state that fact.

**ANSWER:**

DEQ has not yet made a determination that both the quantity and quality of water in both the surface and underground water systems that supply the alluvial valley floor of the Tongue River Valley in the area of the Brook Mine would not be materially damaged by the mining and associated activities.

**INTERROGATORY NO. 8:** Identify all witnesses that you will call or may call at any contested case hearing in this matter. In relation to each witness, identify the witness by name, provide contact information, any company or organization which employs the witness and a summary of the material information which you believe this witness may have or testify to at any hearing.

**ANSWER:**

**Objection:** DEQ objects to this interrogatory to the extent that it would require DEQ to provide disclosures prior to the timeline established in the scheduling order in this matter. DEQ reserves its right to provide its witness disclosures according to the scheduling order.

**INTERROGATORY NO. 9:** Identify each person whom you expect to call or utilize as an expert at the contested case hearing. In relation to each expert, regardless of whether or not the expert is a “retained” expert, identify the following:

1. His or her name, current address and area of expertise, and the name of any company, organization or entity with which the expert is employed or affiliated.
2. Specifically identify and give a comprehensive statement of all opinions the expert will offer at trial or any hearing, and give a detailed explanation of the basis and facts upon which the expert relies for his or her proffered opinion.
3. Identify all publications authored or co-authored by the expert within the last 10 years.
4. Identify all cases in which the expert has testified as an expert witness (by deposition or trial testimony) within the last 4 years. As to each case, identify the approximate date of the case, names of the parties and their lawyers and the court which exercised jurisdiction.
5. Identify all documents supplied to the expert by you and all other documents of any sort reviewed by the expert in relation to this case.

**ANSWER:**

**Objection.** This interrogatory exceeds the requirements of the Wyoming Rules of Civil Procedure and the DEQ Rules of Practice and Procedure related to expert disclosures in

Environmental Quality Council hearings. This interrogatory would also require DEQ to provide disclosures prior to the timeline established in the scheduling order in this matter. Additionally, this interrogatory requests information protected by work product and attorney-client privilege.

Moreover, this interrogatory is vague, overly broad, and unduly burdensome to the extent that it requests all documents supplied to, and “all other documents of any sort reviewed” by DEQ expert witnesses. DEQ’s expert witnesses have not been specifically retained to provide expert testimony in this matter and therefore the documents they have reviewed or had available to them include all of DEQ’s files regarding this permit application extending over the long period during which DEQ has reviewed the permit application.

Without waiving these objections, with respect to subparagraph #1, DEQ has already provided this information in its expert witness disclosures provided to the parties.

With respect to subparagraph #2, DEQ has already provided this information in its expert witness disclosures provided to the parties. DEQ reserves its right to provide its witness disclosures according to the scheduling order and the Rules of Civil Procedure.

With respect to subparagraph #3, this information can be found in documents produced in response to Request for Production 5.

With respect to subparagraph #4, this information can be found in document produced in response to Request for Production 5.

With respect to subparagraph #5, all of the expert witnesses designated by DEQ are employees of the agency and were not specifically retained to provide expert testimony in this case. DEQ’s expert witnesses have reviewed and had available to them the permit application and its related files. DEQ experts have also reviewed or had available to them correspondence, email, and other documents exchanged between DEQ, its counsel, and those experts are privileged work product, attorney-client communication, or documents covered by the deliberative process privilege. It is unduly burdensome and unreasonable for DEQ to identify each document that its witnesses may have reviewed or had available to them over the last five years.

**INTERROGATORY NO. 10:** Identify whether the mine plan requires that domestic and stock wells which are impacted or damaged by mine operations will be repaired and/or replaced if the wells are “registered” with the Wyoming State Engineer’s Office as opposed to being “adjudicated”.

**ANSWER:**

The Brook Mine permit application, Mine Plan MP 5.8 currently states, “If any adjudicated water rights are determined to be effected by the dewatering process of the Brook Mine, that water right will be replaced with a water source of similar quantity and quality as required by Wyoming Statute §35-11-415(b)(xii), until such time that the original surface water right's functionality is restored.” Based on the comments received during the public notice period, LQD will require the mine to revise the above language to include all wells that are registered with the Wyoming State Engineer’s Office.

**INTERROGATORY NO. 11:** Identify the locations of all monitoring stations on the Tongue River which are included in the mine plan and include in your answer whether monitoring

stations are located upstream and downstream of the permit boundary and why DEQ considers the identified stations adequate to monitor for potential adverse impacts on the Tongue River by the Brook mining operation.

**ANSWER:**

As noted in Mine Plan Section MP.7.1 and Table MP.7-1 of the Brook Mine Permit Application, the Tongue River at two existing USGS stations outside the permit boundary (Station No. 06299980 – *Tongue River at Monarch, WY* and Station No. 06306300 - *Tongue River at State Line near Decker, MT*) will be part of the operational monitoring plan during the mining phase of the permit. The location of the USGS Station No. 06299980 is shown in Mine Plan Exhibit MP.7-1 of the Brook Mine permit application. The location of the USGS Station No. 06306300 is shown in Appendix D6 Exhibit D6.1-1 of the Brook Mine permit application. USGS Station No. 06299980 is not located upstream of the permit boundary; it is located downstream of the confluence of Slater Creek and the Tongue River. USGS Station No. 06306300 is located downstream of the permit boundary in Montana, just north of the Wyoming state line.

Based on the comments received during the public notice period, LQD may recommend revising the locations of monitoring stations on the Tongue River and Goose Creek.

**INTERROGATORY NO. 12:** What is DEQ's current understanding of the annual and total coal production estimates presented by Brook Mine and/or Ramaco representatives in the first five years of production, and since those estimates appear to have changed over time, explain how DEQ has been able to accurately evaluate the potential impacts to air quality, water quality and resources, and land resources?

**ANSWER:**

The production estimates in the Brook Mine permit application are located in Table MP.2-1. DEQ's understanding is that the estimates in that table are current.

**INTERROGATORY NO. 13:** How many surface coal mine applications and permits for new surface coal mines, including highwall mining, in the State of Wyoming have the DEQ offices in Wyoming and the DEQ offices in Sheridan County reviewed and evaluated within the last twenty years?

**ANSWER:**

During the past 20 years, LQD has reviewed and approved 4 new permit applications, 2 of which were processed by the Sheridan District 3 office. Also during the past 20 years, the LQD has reviewed and approved 46 permit amendments, which add new area to an existing permits. The Sheridan District 3 office has processed 29 of the 46 permit amendments. The information submitted by applicants and reviewed/approved by LQD is the same for an amendment and for a new application, with the only difference being that an amendment is not assigned a new permit number. In fact, amendments may be more complex than a new permit because the mine plan and reclamation plan have to combine with the existing permit.

LQD has also processed numerous surface coal mine permit renewals and major revisions.

**INTERROGATORY NO. 14:** Identify all seismographic studies, testing and field reports (AML or otherwise) which have been conducted and in which data has been collected in the vicinity of the proposed Brook Mine within the last three years. Include in your answer the identification of the individuals and companies involved in these studies.


**ANSWER:**

A study under AML Project 17.6B-TetraTech has been conducting geotechnical investigation on several locations in Sheridan County where infrastructure (roads, powerlines, etc.) crosses suspected areas of underground mine workings. The locations selected for investigation are based upon the extents of underground mines as interpreted from historic mine mapping. The ultimate goal of the investigation is to determine if there is subsidence potential in these areas of infrastructure. Tetra Tech, AML's consultant, contracted Fugro Consultants, Inc. to perform the seismic field work.

In addition to other documents provided in the response to PRBRC Interrogatory No. 13, AML has reports on the seismic study, and drill hole logs from a subsequent drilling investigation along Decker Road. The reports listed below contain interpretation of seismic data anomalies that may indicate the presence of potential mine voids. The data interpretations are intended to guide selection of drill hole locations for confirmatory drilling. At present data collection is incomplete, and further investigation will be directed by iterative data collection and confirmation. A report will be forthcoming once the data collection phase is complete. The parties involved in the study are the firms identified within the reports.

- **Summary of Anomalies Data Report:** Work Phase 7: Custer Armstrong; Work Phase 10: Dietz, Stormking, Monarch 45; Work Phase 11: Acme No. 3, Carney, Old Monarch, Monarch 45-2, Monarch, Goldenrod, Foothills. Fugro Document No.: 04.79160017\_3.1
- **Summary of Anomalies:** Dietz Mine Decker Rd. and Decker Spur Sheridan, WY Work Phase 8. Fugro Document No.: 04.79160017\_2
- Drill logs for Stations 124, 264, 268, 364, 1163, 1210, 1218, 1226 along Decker Road, as selected based upon the Dietz Mine Decker Road seismic report.

Dated this 20<sup>th</sup> day of April, 2017.

  
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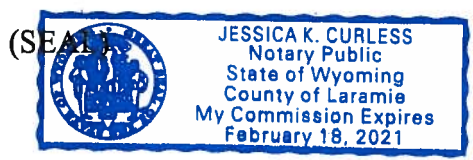
I, Alan Edwards, the Deputy Director of the Wyoming Department of Environmental Quality, have reviewed the Wyoming Department of Environmental Quality's responses to Objector Mary Brezik-Fisher and David Fisher's interrogatories, and I hereby confirm that they have been prepared under my direction and are true and correct to the best of my knowledge and belief.

Alan Edwards

STATE OF WYOMING     )  
  ) ss  
COUNTY OF LARAMIE    )

Subscribed and sworn to before me this 20<sup>th</sup> day of April, 2017 by  
Alan Edwards.

Jessica K. Curless  
Notary Public



My Commission Expires: Feb. 18, 2021

**CERTIFICATE OF SERVICE**

I hereby certify that on the 20<sup>th</sup> day of April, 2017, a copy of the foregoing document with its attachments was served via U.S. mail and a copy of the foregoing document without attachments was served via electronic mail on the following:

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