

Response to Informal Hearing UEI Technical Report

August 13, 2018

TO: Dana Dean, Associate Director, Informal Hearing Officer

THRU:  Daron Haddock, Program Manager

FROM: Steve Christensen, Permit Supervisor
Priscilla Burton, Inspector 
Justin Eatchel, Mining Engineer 


RE: Technical Report dated July 27, 2018 Informal Assessment Conference Interim Order dated July 17, 2018 Requesting Supplemental Information. UtahAmerican Energy, Inc. (UEI), Centennial Mine, Permit #0070019

SUMMARY:

During the Informal Hearing on June 28, 2018, the Permittee presented the argument that reclamation of the degasification wells would impede future mining operations because the wells may be necessary should mining resume. The Division Order dated July 17, 2018 requested supplemental detail in support of this argument.

“Specifically, the Conference Officer requests that UAE [sic] provide a PE certified technical report showing that the ten (those noted in the Division’s CO) unplugged, unreclaimed degasification wells are necessary for future mining operations. The report should contain information on UAE’s [sic] plans to mine in the future, what areas it plans to mine, how those areas will be accessed and how the named wells will play into the ventilation of methane from those areas.”

UEI filed a technical report on July 27, 2018 in response to the Hearing Officer’s request. The Division was directed to respond to this technical report filed by UEI by August 13, 2018. The following is an analysis of UEI’s technical report based on the items requested by the Hearing Officer.

“Provide a P.E. Certified Document”

Analysis:

The report states that the author is a Professional Engineer certified in Colorado. The professional licensing regulations, Title 58, Chapter 22 of the Utah Code Annotated for professional engineers and professional land surveyors states that any final plan, map, sketch, survey, drawing, document, plat or report filed with public authorities shall bear the seal of the professional licensed in the State of Utah. Utah Code Ann. § 58-22-602.

Finding:

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The Technical Report is not certified by a professional engineer licensed in the State of Utah.

“Show that 10 (those noted in the Cessation Order) unplugged, unreclaimed degasification wells are necessary for operations”

Analysis:

The ten wells noted in the Cessation Order are 3, 4, 5A, 6, 7, 7A, 8, 8A, 9 and 11.

The Technical Report states that methane extractor units (MEUs) may be connected to existing degasification wells as necessary to lower the pressure in the gob in accordance with the MSHA ventilation plan (para. 5). An excerpt from the MSHA ventilation plan is attached to the Technical Report as Exhibit 1, however this excerpt does not provide any calculations, diagrams, or supporting data to demonstrate how degas wells would adequately vent methane from the gob should mining resume and ventilation be re-established.

The Technical Report states that the condition of the 10 existing degas wells and flow paths within the gob cannot be predicted at this time (para 6). The adverse differential pressure across the seals cannot be predicted (para 7). Regardless of what the differential pressure across the seals might be currently, if the gob vent holes are required to maintain safety within an anticipated ventilation plan, prudent engineering practice ought to consider the most plausible ventilation scenarios, with an explanation addressing the need for gob vent holes within that system.

Finding:

The Technical Report states that the potential for using the degasification wells in future ventilation plans is unpredictable. The Technical Report does not show that the 10 wells (GVH 3, 4, 5A, 6, 7, 7A, 8, 8A, 9 and 11) are required for future ventilation.

“UEI’s plans to mine in the future”

Analysis:

Future mining plans are also required as part of the minimum requirements for legal, financial, compliance and related information provided with the Mining and Reclamation Plan (MRP). R645-301-112.800 requires a Permittee to provide a statement of all lands, interest in lands, options, or pending bids on interests held or made by the applicant for lands contiguous to the permit area. R645-302-114 requires that a Permittee provide a description of the right of entry documents and lands to which they have the legal right to enter.

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The MRP states in Appendix X Section 112.800, “Andalex Resources, Inc. has no interest in contiguous lands other than those currently owned as shown on Plate 1A of the approved MRP.” As shown on Plate 1A, the remaining coal reserves available to the Permittee located within the Mathis Fee reserve and within a portion of federal Coal Leases UTU-066060 and U-69600. The two Federal coal leases are located immediately south of the Mathis Fee reserve.

The Technical Report states in paragraph 2 that mining would be conducted in the Mathis Fee lease area “and/or currently unleased areas to the West”.

The Permittee retains the Mathis fee lease where GVH sites 8, 8A, and 9 are located. However, the only access to the Mathis Lease is through sealed portals into federal leases U-010581 and SL27304; both of which have also been relinquished.

Coal reserves located west of the Mathis Fee lease area are primarily within the Federal Kenilworth Coal Lease (UTU-81893). The Permittee initiated a Lease By Application process through the BLM, purchased the Kenilworth Lease, and began permitting through the Division in March of 2014 (Task #4552). In July 2016, the Division was notified of the “relinquishment of the Kenilworth Lease UTU-81893 in its entirety,” (Incoming document 7272016) and the Permittee withdrew the Kenilworth Lease permitting action (Task #4763). Therefore, the assertion that future mining may occur west of the Mathis Fee lease area is dubious. The Permittee recognized that the likelihood of re-entering the Mathis lease was limited when making the decision to seal and reclaim GVH sites 12, 13, and 14.

In 2008, the Permittee relinquished all of federal coal lease UTU-79975 and significant portion of federal coal lease U-066060 that gave them right of entry to the coal where 7 of the 10 specified GVH sites are located (GVH sites 3, 4, 5A, 6, 7, 7A, and 11, 2008 Incoming document 0005). Though the Permittee maintains surface right of entry with the private land owners, their plan and maps clearly indicate that they have no mineral rights and no federal coal lease that allows for mining activity in the areas of the GVH sites, except for GVH 8, 8A and 9 on the Mathis Lease. In order for the Division to allow the GVH wells to remain to facilitate future mining activity, the Permittee must demonstrate that they have a legal right to enter and conduct coal mining operations in the area containing the disputed GVH’s.

The Cessation Order (CO) cited a violation of R645-301-551. R645-301-551 outlines the requirement for the casing and sealing of underground openings including drill holes. The rule explicitly directs the casing and sealing of underground openings “when no longer needed for monitoring or other use approved by the Division...” (emphasis added). At a minimum, seven GVH sites that are located in areas of lease relinquishment must be capped, sealed and backfilled or turned over to someone that has the right to the mineral estate and can use them as part of an alternative post-mining land use. Liberty Pioneer, the gas operator identified in MRP Appendix X Attachment 1-1, has no interest in any of the ten gas wells (or the compressor station), unless the mine resumes operation (email from Kimball Hodges, Liberty Pioneer, dated 5/30/2018).

Finding:

In accordance with R645-301-114, The Division does not have the authority to allow the degas wells or related structures to remain for the purpose of coal mining. Temporary cessation status does not apply to the GVH wells, because UEI has no right of entry to the mineral estate. By relinquishing the leases, it appears that the

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Permittee relinquished their access to the Gob Vent Holes within the relinquished leases. The Utah R645 Coal Rules are clear that once mining is completed, reclamation will follow. R645-301-541.300.

“What area UEI plans to mine”

Analysis:

The Technical Report states that access to the Mathis lease and other leases West of the permit area will be accessed through the rehabilitated portals. As previously mentioned, all portals enter relinquished leases, so that Right of Entry is again an issue for accessing leased coal in the Mathis Lease and federal leases U 066060 and U-69600.

In the Mathis Lease, the Division calculates that there is only 1,3 million tons remaining to be mined. (The tonnage calculation was based on a maximum of 2 more long wall panels each 0.75 mile long X 400 ft. wide X 10 ft. height and a bank density of 84 lbs/CF). This small amount of coal for which the mine has Right of Entry would not justify the cost of re-opening the mine.

The Technical Report states that safe operation of the mine is a responsibility which the Permittee takes very seriously (para 7). Coal in the Mathis lease lies beneath 3,000 feet of cover (BLM Mine Map dated 2016). Instability due to depth of cover and roof support requirements factored into the decision to relinquish federal lease U79975 before panel 10 was completed (Incoming folder 10012009, p. 11 – 19). This safety issue will not change upon re-entry of the Mathis Lease unless there are technological innovations to coal mining.

Finding:

Due to safety concerns and cost, the Division does not find it credible that the sealed portals will be re-opened and the mine rehabilitated to access the remaining coal reserves.

“How will future areas be accessed”

Analysis:

The Technical Report states that future mining areas will be access through portals and mine workings that have been sealed for 10 years. Specifically, the Technical Report states:

The area will be de-watered, the mine entries will be rehabilitated, and an MSHA approved ventilation plan will be established (para 2).

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More than 60 longwall panel seals will require repair and/or new construction to limit methane from the gob areas leaking into the entries (para 3).

Methane extractor units may be used to remove methane and lower the pressure in the gob (para 5).

The condition of the 10 existing degas wells and flow paths within the gob cannot be predicted at this time (para 6). The adverse differential pressure across the seals cannot be predicted (para 7).

In addition to the unpredictable elements of the seals and gas flow mentioned in the report, other unknowns such the location of the potentiometric surface, the condition of the roof supports after submersion under water are not mentioned. The volume of water to be removed for the degasification wells to function and its treatment were not considered. These issues along with the costs of installing a mine fan and other necessary mining infrastructure would all enter into a cost benefit analysis before re-opening the sealed mine.

Finding:

The Technical Report does not provide enough detail to persuade the Division of the likelihood of rehabilitating the sealed mine to access future areas.

“How will the named wells play into the ventilation of methane ”

Analysis:

The MRP states that the degas wells were installed to serve as a ventilation assistance program (Appendix X, Section 110, p. 1-1). An excerpt of the MSHA ventilation plan for the degas wells is attached as Exhibit 1 to the Technical Report. Exhibit 1 spells out the operational requirements and components for all degas wells once connected to gob areas or mine workings (Ex. 1, Item 10). Exhibit 1 Plate: ABGVH #1 is a diagram of the required components of the degas wells. None of the 10 wells have all the components shown in the diagram such as the check valves, flame arrestors, and methane monitors.

At operational wells, MSHA requires weekly inspection and methane monitoring of each drill hole by qualified persons until they are shut-in (Item 8). Each drill hole should be capable of being automatically shut-in if the methane concentration in the drill hole drops below 25%. To the Division’s knowledge, none of the wells are being monitored for methane.

All 10 wells have been shut-in. [A shut in well is one that has been closed off so that it stops producing.] By definition, shut-in degas wells have served their purpose to ventilate the gob. Utah Coal Mining Rules R645-301-551 requires that “each opening to the surface from underground will be capped, sealed and backfilled, or otherwise properly managed” when no longer needed. The rule further states that with respect to drill holes, the Oil & Gas program requirements of R649-3-24 will satisfy this requirement.

Since all of the 10 wells are shut-in, only Items 7 and 11 of the MSHA operation plan currently apply:

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Item 7: “Until they are fully sealed, all well sites are to be fenced to prevent unauthorized entry and posted with No Smoking signs.” The Division has noted in Inspection Reports that fences around wells are continually broken down and grazing animals are often found within the degas well pads. The Division has not observed No Smoking signs at any of the sites.

Item 11: “A closed and locked gate valve will be left in place of each GVH that is not capped or plugged.” Shut in degas well 5A had been leaking for 1.5 years and was reported to Permittee on three occasions before the NOV/CO was written. During the May 31, 2018 inspection, two additional wells were audibly venting gas. Since all the wells have the same valve assembly, the potential for additional wells to begin leaking and go unnoticed is high. All shut-in wells should be sealed and reclaimed.

Exhibit 1 provides a typical of the degas well construction. These wells are steel cased. The steel casing could be a conveyance for lightning to enter the ground and ignite the methane. A public safety event could occur if there was a lightning strike or a wild fire or a careless person. An explosion of methane gas could cause harm to cabins (and people).

The Centennial Mining & Reclamation Plan states in Appendix X, Section 542.700, “All openings will be sealed in accordance with Federal and State Regulations. The casings will be plugged at the bottom to hold concrete. A lean concrete mixture will be poured into the casing until the concrete is within five (5) feet of the surface. At that time the casing will be cut off at ground level and the rest of the casing will be filled with lean concrete.”

The Permittee is not operating according to the plan described in MRP Section 542.700. The Permittee is not operating according to the plan described in the operating agreement found in Attachment 1-1 of App. X of the MRP (Article II, Item 2.3), which states when mining ceases, the mine operator will accomplish the required reclamation in accordance with mining law.

Finding:

The Division finds that the degas wells no longer provide ventilation assistance. In accordance with R645-301-551, shut-in wells are no longer being maintained in accordance with the MSHA ventilation plan and are no longer needed for ventilation assistance, therefore, they should be reclaimed according to the plan described in the MRP Appendix X Section 542.700.