

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

May 19, 2009

TO: Internal File

THRU: Dave Darby, Team Lead, Environmental Scientist III, Geology
Jim Smith, Permit Supervisor *JS 09/12/09*

FROM: Peter Hess, Environmental Scientist III, Engineering *PHH my SAS*

RE: PHASE III BOND RELEASE APPLICATION, UtahAmerican Energy, Inc., Horse Canyon Mine, Permit Areas "A" (Geneva Mine) and Permit Area "B" (Lila Canyon Mine), C/007/013, Task ID # 3268

SUMMARY:

The Permittee submitted a response to the deficiencies, which the Division identified in the Phase III bond release application dated January 20, 2009 (Task ID # 3080) on April 20, 2009. The response received on April 20, 2009 has been identified as Task ID # 3268.

This memo will address the adequacy of the responses relative to a method to permanently barricade the two ventilation entries associated with the Geneva Mine in Lila Canyon. The entries have been considered a problem by involved regulatory agencies since the early 1990's, when they provided access into the old Geneva Mine for exploration purposes.

As the two entries were developed from inside the Geneva Mine and broken out into Lila Canyon, there was no machinery access developed for backfilling and other reclamation activities. The installed seals were not felt to adequately address the requirements of R645-301-513.500.

The two portals are located on Federal lease SL-066145, which is associated with the Geneva Mine, and therefore the U.S. DOI / Bureau of Land Management (BLM) is the regulatory agency involved with any approval dealing with these accesses.

The Utah State Office of the BLM approved the Permittee's proposed barricade design for the two entries on September 25, 2008 (approved Construction Design UEI 12-27-06, REVISED 9-12-08). The BLM approved design proposes to construct a reinforced screen barricade over the old fan entry / air return entry and a rubble barrier or backfill at the intake entry.

The Lila Canyon Mine was permitted as an extension to the Horse Canyon (Geneva) Mine. With the closing and reclamation of the Geneva Mine the Permittee requested that any further mitigation concerning the Lila Canyon portals take place under the Lila Canyon permit. Annual monitoring of the closures will occur during the mine life of the Lila Canyon Mine. When mining activities are terminated at Lila Canyon Mine, and assuming that no vandalism or unauthorized access attempts or ingress has occurred, at the barriers, the BLM has stated that the barriers will be considered as permanent closure methods for the two entries.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

The two ventilation entries known as the Lila Canyon portals at the Geneva Mine were developed from inside prior to August 3, 1977. They helped ventilate the U.S. Steel operation up through the early 1980's. The ventilation fan was pulled back inside the mountain and the portals seals were constructed. In 1993, the seals were breached by Boulder Exploration Group (BXG) / Sunnyside Reclamation and Salvage to determine if re-opening the Geneva Mine would be a worth while effort. The portals were re-sealed and no further activity occurred.

The seals are constructed from 50 to 80 feet inby the brow of the escarpment, and it was a concern of the DOGM that the lack of positive ventilation in the entries could be a hazard for unsuspecting hikers/explorers. Utah rules require seals be set back 25 feet from the surface. Although the portals are approximately a two hour hike from any vehicular access up a steep narrow path and have never known to been accessed other than by the mine personnel during mining and regulatory agencies during mine reclamation activities. The regulatory agencies felt that additional precautions needed implementation (to the extent possible) potential liability for the government entities involved.

Backfilling of the two entries, in accordance with the requirements of R645-301-513.500 and R645-301-551 was investigated. In order to backfill, machine access would require development resulting in excessive disturbance in the area. This idea was not

considered plausible. Backfilling by hand for the normally required 25 feet distance was ruled out as being too labor intensive. The construction of high strength steel barricades over both entries was considered as cost prohibitive.

The Permittee submitted a proposal to the Bureau of Land Management for the screen barricade at the fan portal, and a rock backfill at the intake portal. A drawing of the proposed barrier screen has been submitted and is identified as "Chain-Link Portal Barrier". The BLM approved this design on September 22, 2008.

In order to expedite the Phase III bond release application for the reclaimed areas associated with the Geneva Mine, the Division required the Permittee to transfer the liability associated with the Geneva Mine / Lila Canyon ventilation portals to the permit area "B" responsibility. This required amending the permit area "B" mining and reclamation plan to include the design, construction and bonding requirements of the Lila fan portal entries. The Division agreed to approve this liability transfer to the Lila Canyon Mine permit with the following stipulations, in addition to what was already approved within the BLM approval;

- 1) As determined by the DOGM, a sign will be installed on the Barriers that state "Possible Explosive Atmosphere and/or Possible Oxygen Deficient Atmosphere May Exist Behind this Barricade". The Permittee has made this stipulation part of the design approved under the BLM (See design drawing for cable / chain link barrier) and which is to be added to Appendix 5-6.
- 2) The signs will be maintained in accordance with R645-301-521.210 and 521.230.
- 3) The responsibility for the maintenance and monitoring of the Geneva Mine / Lila Canyon fan portal seal barriers lies with UEI or other subsequent C/007/013 permit holders.
- 4) The barriers will be installed and annual monitoring initiated by the third quarter of 2010. The monitoring will continue for the life of the (Permit Area "B") Mine at which time, assuming that no vandalism has occurred, the barriers will be considered "permanent" and annual monitoring will be suspended.
- 5) A copy of each annual inspection of the Geneva Mine Portals in Lila Canyon will be provided to the USDOJ / BLM / Price Field Office and the Utah Division of Oil, Gas, and Mining no later than thirty days after said inspection. The inspections shall include photo documentation of the barrier condition with date documented exposures.

- 6) Damage to the cable/chain link barriers will be adequately repaired as soon as practicable.
- 7) A bond line item will be added to the Lila Canyon bond to include the Geneva fan portal closure in the amount of \$ 5,000.

The Task ID # 3268 response includes Plate 5-5, Mine Map, which shows the location of the Geneva Mine/Lila Canyon portals in relation to the proposed Lila Canyon Mine projection. The Geneva portals are shown to be on the edge of the Lila Canyon Mine permit area "B" permit boundary. The liability for those portals is now considered as being within the permit area "B" mine permit responsibility.

In accordance with the requirements of R645-301-529, Management of Mine Openings, and R645-301-529.100, Management of Exposed Underground Openings As Approved by the Division, the Permittee's application to construct a chain link and cable barricade over the Geneva Mine Lila fan portal as well as a rubble backfill in the intake portal appears to be the best method of providing a temporary closure to the Lila portal entries. This determination has been made based upon practicality and cost-effectiveness.

Upon review of the annual inspections and reports conducted by the Permittee of the temporary barricades at these two entries in Lila Canyon, and a determination that no vandalism or unauthorized access has been gained to the Geneva Mine seals, the Division, in concurrence with the USDOJ / BLM/Utah State Office, will consider the barricade to be permanent closure methods.

All information submitted as part of the Geneva Mine / Lila Canyon portals barriers and approved by the BLM and the Utah DOGM is to be inserted into Appendix 5-6 of the Lila Canyon Mine / Permit Area "B" mining and reclamation plan

Findings:

The Task ID # 3268 application meets the minimum regulatory requirements of the R645 Coal Mining Rules.

RECOMMENDATION

The Task ID # 3268 response should be approved by the Utah Division of Oil, Gas, and Mining.