

Memo

To: AWI Administrative Record
From: Rick Clegg
CC: Bill Stout-BLM, Chris Morris-IDL
Date: October 13, 2004
Re: **Orphan Site Follow Up Visit Results**

The Idaho Department of Environmental Quality (DEQ) published an interagency *Orphan Mine Site Preliminary Assessment Screening Report* in April 2004 recommending additional reclamation activities at a number of orphan sites based on July 2002 inspection observations. In May 2004, sampling of adjacent surface waters was conducted at a number of the sites to evaluate the presence of existing selenium releases of which were not detected. On September 21, 2004, follow up orphan site visits were conducted by representatives of DEQ, the Bureau of Land Management (BLM) and the Idaho Department of Lands (IDL) to determine the appropriate reclamation actions required at the Bloomington Canyon Mine, Consolidated Mine, Paris Canyon Mine, Home Canyon Mine, Waterloo Mine, Bennington Canyon Mine, and Hot Springs Mine. The results are as follows:

Bloomington Canyon Mine - The Bloomington Canyon Mine is located in Bear Lake County in Section 21, Township 14 South, Range 43 East, one mile west of the town of Bloomington, Idaho. The Federal mining lease (I-012982) is held by Earth Sciences, Inc. of Littleton, Colorado and the property is deeded the Bateman Family Trust. The site contains three adits, two of which need resealed to restrict public access. The site also supports a large waste rock dump approximately 200 feet by 600 feet with an estimated thickness of 10 to 20 feet. The overburden consists primarily of black middle waste shales with excessive erosion and very sparse to no vegetative cover. There is visual evidence of migration into the road adjacent to Bloomington Creek. The Agencies do consider this to be a high priority site for reclamation improvements. We recommend grading, topsoiling and seeding the face of the dump for stabilization to prevent uncontrolled releases to the waters of the State. Based on a cost of \$30 per cubic yard of topsoil transported and placed in a thickness of 6" over 2/3 of the dump and seeded, the estimated cost of these activities is approximately \$40,000.

Consolidated Mine – Consolidated Mine is located in Bear Lake County in Section 8, Township 14 South, Range 43 East approximately 2 miles west of Bloomington, Idaho. The site is apparently on private land although the owner has not been identified. The site supports a large open adit, an old wooden shed, and a number of waste rock dumps bisected by a drywash creek bed. The dumps measure approximately 300 feet by 100 feet and approximately 25 feet high. Erosion from the dumps appears to be trapped by a sedimentation dam approximately 200 feet downgradient. Because this site is located within fenced property and any sediment releases appear to be contained at the present time, the Agencies consider this to be a medium priority site. However, it is recommended that the adit entrance be closed; the waste dumps reconsolidated, armored and seeded; and the sedimentation trap cleaned out to ensure continued long term removal efficiency. Based on a cost of \$30 per cubic yard of topsoil transported and placed in a thickness of 6” over 2/3 of the dump and seeded; armoring at approximately \$10 per square foot; and sedimentation basin cleanout and repairs at ~\$15 per cubic yard, the estimated cost of these activities is approximately \$25,000.

Paris Canyon Mine - Paris Canyon Mine is located in Bear Lake County in Section 8, Township 14 South, Range 43 east approximately 2 miles west of Paris, Idaho. The site is on private land acquired by Earth Sciences, Inc. of Littleton, Colorado in 1973. The site occurs on both slopes of Paris Canyon and is bisected by Paris Canyon Road. It consists of two production adits, approximately five waste dumps, and a large complex of former facility platforms and foundations. Both adits are open and accessible, and should be sealed to prevent public access. There are several black shale waste dumps on each side of Paris Canyon Road. The southern dump is on the slope of the road embankment and appears to be relatively shallow. Two separate dumps, of approximately 100 cubic yards of material, exist on the northern side of the road abutting Paris Creek. The Agencies recommend that these dumps be excavated and removed to more protective area of the site, possibly the draw approximately 2500 feet south of the road, where the material could be consolidated and seeded without threat of future surface water releases. Due to the proximity of waste materials to Paris Creek, the Agencies do consider this to be a high priority site. Based on a cost of \$30 per cubic yard for excavation, removal, placement, and seeding of waste rock piles, the estimated cost of these activities is approximately \$5,000.

Home Canyon Mine – Home Canyon Mine is located in Bear Lake County in Section 31, Township 12 South, Range 45 East approximately 5 miles east of Montpelier, Idaho. The site is on private ground, believed to be owned by Bear Lake County, and is surrounded by Forest Service land. During the 2002 inspection, the site was found to have an open adit, unreclaimed roads, and a dump

believed to have the potential for releases to Montpelier Creek. Since that time, the Idaho Department of lands has installed a heavy duty steel gate over the adit, and has performed extensive road closure and reclamation activities. The waste dump now supports extensive vegetation resulting in adequate stabilization, and no direct pathways to Montpelier Creek have been identified. Spring 2004 surface water sampling resulted in no detectable levels of mining-related trace elements. As a result of recent improvements and site observations, the Agencies have recommended “no further action” at this time.

Waterloo Mine – Waterloo Mine is located in Bear lake County in Sections 6 and 7, Township 13 South, Range 45 East approximately 4.5 miles east of Montpelier, Idaho. The site owned by Bear Lake County and is operated as the Bear Lake County landfill. The southern mine pit also supports a local shooting range. Due to it’s current use, the site is monitored under the DEQ’s solid waste program and is subject to periodic groundwater sampling. The mine wastes are used as landfill cover and are slowly being backfilled into the mine pits. No existing surface water pathways were observed on site during the 2002 inspections, and the Spring 2004 surface water sampling event did not indicate the presence of any mining-related trace elements in Montpelier Creek which is a few hundred feet north of the site. Therefore, the Agencies have recommended that further actions for this site, under the mine waste program, be “deferred” to the ongoing monitoring and regulatory oversight of the solid waste program.

Bennington Canyon Mine – Bennington Canyon Mine is located in Bear Lake County in Section 14, Township 12 South, Range 44 East approximately 3 miles east of Bennington, Idaho. It is on private land owned by George W. Lane of Montpelier, Idaho. In 2002, a number of observations led to an Agency recommendation for additional reclamation activities at the site. These consisted of a flowing standpipe with runoff occurring across the dump; the presence of an unreclaimed waste dump surface with evidence of erosion; and the presence of an adjacent cultivated field that was receiving both runoff and erosion deposition that may have presented a human health risk through ingestion. During the 2004 site inspection, a number of improvements have occurred at the site. The waste dump was reshaped and seeded to provide stabilized surfaces; the standpipe was directed to a newly constructed trough apparently for livestock watering, eliminating the flow pathway; and, the cultivated field is now vegetated by native species and is no longer a sink for contaminant transport. There are no adjacent surface water features or open adits present. As a result of recent improvements and current observations, the Agencies are recommending “no further action” at this site at this time.

Hot Springs Mine – Hot Springs Mine is located in Sections 1, 12, 13, and 24 of Township 15 South, Range 44 East on the northern end of the east shore of Mud Lake Refuge, north of the Bear Lake dam. The site is on land partially owned by the U.S Fish & Wildlife Service and private patents owned by Rhodia, Inc. This site was inspected during an earlier site visit due to suspected releases to Mud Lake.

The site consists of two separate areas, referred to as the North Lake and Discovery Areas. The North Lake area supports a partially open adit believed to be approximately 1700 feet in length, and a large unreclaimed waste rock dump, estimated at approximately 8,000 cubic yards, that lies between the adit and Bear Lake Road. The Discovery area is approximately 1.5 miles to the southeast and consists of two open adits believed to support approximately 700 feet of tunnel, and two small waste dumps of approximately 200 cubic yards.

Due to site observations and suspected release pathways, this site is considered a high priority for reclamation improvements. In July 2004, Rhodia submitted a work plan to the Agencies to conduct voluntary reclamation activities at the site. These activities will consist of waste consolidation and regarding to <3 to 1 slopes, capping the dumps with approximately 1.5 feet of limestone to provide a capillary break for vegetation, topsoiling at least 1 foot of growth medium, and seeding using a design seed mix. The plan also included the permanent closure of three open adits for public safety. According to the work plans, the estimated cost of these activities with post-reclamation O&M is ~\$90,000. The Agencies are currently completing an Environmental Assessment required for activities involving Federal lands, and plan to approve these activities for implementation during the 2005 field season.

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In conclusion, the Agencies conducted follow-up site inspections for the historic mining sites identified for further actions based on 2002 site observations. Of the seven sites revisited, two (Home Canyon, Bennington Canyon) were recommended for "no further action", one (Waterloo) was deferred to the solid waste program for continued monitoring and regulatory oversight, three (Paris Canyon, Bloomington Canyon, Consolidated) were recommended for additional reclamation and safety improvements, and one (Hot Springs) is in the process for voluntary actions to be completed in 2005. The Agencies are in the process of contacting site owners and researching the availability of abandoned mine land funds to address the remaining sites over the next several years.