United States Department of the Interior
Bureau of Land Management

M/037/0088
Incoming

Decision Record
Environmental Assessment
DOI-BLM-UT-Y010-2015-0158-EA

October, 2015

Centennial Pit Backfilling Mine Plan Modification for the Lisbon Valley Copper Mine, San Juan County, Utah

Location: Sections 25, 36, T. 30 S, R. 25 E

RECEIVED E-Mail
OCT 19 2015
Div. of Oil, Gas & Mining

Applicant/Address: Lisbon Valley Mining Company, LLC
755 North Main Street, Suite B
Moab, Utah 84532

Bureau of Land Management
Moab Field Office
82 East Dogwood
Moab, Utah 84532
Phone: 435-259-2100
Fax: 435-259-2106

DECISION RECORD

Environmental Assessment
DOI-BLM-UT-Y010-2015-0158-EA
Lisbon Valley Mining Company LLC – Modification to the Lower Lisbon Valley Exploration Plan of Operations
San Juan County, Utah

It is my decision to authorize the Lisbon Valley Mining Company LLC (LVMC) proposal to modify an approved mine Plan of Operations (Plan) (Case File No. UTU77879). The proposed Plan modification consists of approximately 231 acres that would be returned to post-mining uses for wildlife and livestock. No new surface disturbance is proposed.

Alternative B, the complete backfill alternative was the selected alternative. Alternative B includes all aspects of the Proposed Action but includes complete backfill of the Centennial Pit. The Proposed Action was analyzed as Alternative A in the Environmental Assessment (EA) (DOI-BLM-UT-Y010-2015-0158-EA). Under Alternative A, the backfill progression will follow pit development along successive pushbacks of the pit walls to final mining limits. The Centennial Pit would be backfilled with waste rock obtained from beds 14 and 15 of the Burro Canyon Formation mined in accordance with the approved waste rock management plan (LVMC, 2005).

This would be accomplished by establishing an access to the target area in the form of either an in-pit haul route or a haul-back route along the pit perimeter. In the case of an in-pit haul, ramps would be constructed within the pit to allow haul traffic to access different elevations. In the proposal, haul trucks would exit the pit, travel around the rim on the surface and then dump over the rim into the target area. Backfilling would then proceed in the target area to predefined limits. When backfilling operations are completed in a target area, the process would repeat itself until all backfilling opportunities are exhausted, resulting eventually of a complete backfill of the Centennial Pit.

Since backfilling would occur within the previously-mined pit, the waste tonnage would not be added to waste dumps located outside the pit. Based on the current mine schedule and fleet capacity, approximately 7 million tons per year would be backfilled into the pit.
Waste rock that has acid-generating potential would be segregated by trained personnel and placed in appropriate, designated areas in accordance with the approved LVMC Waste Rock Management Plan. No acid-generating waste rock would be placed within the pit backfill. It would all be encapsulated within non-acid generating waster rock in the waste rock piles on the surface, per the current Plan of Operations and the waste rock management plan.

LVMC would monitor the backfilling project in accordance with the Utah Department of Environmental Quality (UDEQ) Groundwater Discharge Permit (UDEQ 2015) and Waste Rock Monitoring Plan (LVMC 2005). The groundwater monitoring would extend to a period of at

least 5 years following mine closure (BLM 1997c). Groundwater monitoring wells are shown on Maps 1 and 2 (Appendix A). An additional monitoring well is planned to supplement the existing monitoring wells in the Burro Canyon (BC) aquifer. This proposed well (MW15-16) is included on Maps 1 and 2.

The groundwater-monitoring program for the Lisbon Valley Mine includes routine monitoring of water level elevations and water quality. During backfilling operations, water levels would be measured quarterly during operations in 12 monitoring wells and piezometers and these measurements would be presented in the quarterly sampling reports submitted to UDEQ, DOGM and BLM. Water levels in active pumping wells and observation piezometers located near the pits would be measured monthly for operational purposes, and the data are presented in the Hydrogeologic Update Report submitted annually to BLM, DOGM and UDEQ. Water levels would be measured in accordance with the standard operating procedures. Time-contiguous water level data would be collected to the extent possible. Water quality would be sampled routinely in monitoring wells and water supply wells at the Lisbon Valley Mine.

Temporary and seasonal closures are not planned. In the event that the possibility of an unplanned closure is anticipated, an interim management plan would be developed for review by the BLM. Such a plan would address securing access to the mine area, safeguarding the public, wildlife, and livestock from possible injury on mine property, and protecting the environment from releases of toxic or hazardous materials.

Interim management outside the pit area is provided by surface water diversion in accordance with the Utah Department of Environmental Quality Division of Water Quality (UDWQ)-approved LVMC Stormwater Pollution Prevention Plan (SWPPP) (LVMC 2013b) Stormwater discharges from construction activities such as clearing, grading, excavating, and stockpiling, that disturb one or more acres, (or smaller sites that are part of a larger common plan of development) are regulated under the National Pollutant Discharge Elimination System (NPDES) stormwater program. Operators obtain a permit under the NPDES program that details requirements such as compliance with effluent limits and the development of the SWPPP.

The reclamation plan would continue as currently approved with the exception that a mixture of rock from beds 14 and 15 of the Burro Canyon Formation would be used to backfill the Centennial Pit. The proposed backfilled area would be capable of re-vegetation and would be re-seeded from the air with a BLM-approved seed mix to reduce the potential for erosion of the reclaimed area and return the proposed backfilled area to a future condition capable of providing productive habitat for wildlife or forage for livestock.

There is no requirement to control erosion or runoff (meteoric water run on) in the interior of the open pit. However, the same is reduced as a result of backfilling due to the concomitant reduction of pit surface area. Outside the pit, surface runoff is diverted around the pit in accordance with the approved Storm Water Pollution Prevention Plan SWPPP (LVMC 2013b). Backfilling the pit would serve to buttress the walls and would provide additional stability relative to the final height. Stability is increased by additional backfill.

Authorities: The authority for this decision is contained in the General Mining Act of 1872, as amended, the Federal Land Policy Management Act of 1976, and regulations at 43 CFR 3809.

Compliance and Monitoring: Compliance inspections will be conducted by the BLM during the life of the project or as required by law, to ensure compliance with regulations at 43 CFR 3809 and 3715, including all conditions of approval. Reclaimed areas will be monitored by the BLM until vegetation is successfully restored.

In addition to ensuring compliance with the performance standards specified in 43 CFR 3809.420, the LVMC will conduct monitoring and compliance activities as follows under terms/conditions/stipulations

Terms / Conditions / Stipulations: Potential resource impacts from the Proposed Action will be mitigated through the use of Applicant-Committed Project Design Features identified in Chapter 2.0 of the EA. The Applicant-Committed Project Design Features summarized below are included as conditions of approval to this decision.

- Backfill material is limited to beds 14 and 15. The final composition of the backfill will be not greater than 25% (twenty-five percent) bed 15 material. Backfill material must be reported in accordance with the current waste rock handling procedure and the waste proportions documented.

- Water levels would be measured quarterly during operations in 12 monitoring wells and piezometers and these measurements would be presented in the quarterly sampling reports submitted to UDEQ, DOGM and BLM.

- Water levels in active pumping wells and observation piezometers located near the pits are to be measured monthly and the data presented in the Hydrogeologic Update Report submitted annually to BLM, DOGM and UDEQ. Water levels would be measured in accordance with the standard operating procedures.

- The required Analytical Suite for groundwater monitoring at the Lisbon Valley Mine is provided in the Utah Department of Environmental Quality (UDEQ) Groundwater Discharge Permit. Results will be presented in the quarterly sampling reports submitted to UDEQ, DOGM and BLM.

- Waste rock that has acid-generating potential would be segregated by trained personnel and placed in appropriate, designated areas in accordance with the approved LVMC Waste Rock Management Plan.

- The LVMC lab will analyze Waste rock samples on a quarterly basis to determine acid neutralization potential (ANP), acid generation potential (AGP), and Net Neutralization Potential (NNP) using a sodium hydroxide back titration procedure. Results will be made

available on request. Results will be reported to the BLM and UDOGM on an annual basis.

- On a quarterly basis, the LVMC will composite samples of each rock type and analyze the samples to determine the potential for dissolution and mobility of eight metals, including antimony, arsenic, uranium, cadmium, copper, molybdenum, selenium, and zinc in accordance with the Meteoric Water Mobility Procedure (MWMP). The MWMP analyses will be conducted by ACZ Laboratories, located in Steamboat Springs, Colorado.

- Reporting will include sample location, elevation, sampling date, rock type, and analytical result. Reports will identify the samples used for quarterly MWMP analysis, and relate the results.

- The reclamation plan would continue as currently approved in addition to the approved waste rock from beds 14 and 15 of the Burro Canyon Formation to be used to backfill the Centennial Pit.

- LVMC would manage the pit during backfilling operations with fencing, berms, and re-seeding signage in accordance with the Mitigation and Monitoring Plan (BLM, 1997c). This would include surface water management in accordance with the SWPPP and long term groundwater monitoring in accordance with the reclamation bond.

- The waste rock sampling results will be used to ensure that appropriate configuration of bed 14 and 15 materials was utilized as backfill. The LVMC will produce an as-built map of the backfill documenting the location and extent of each rock type. Each map will be drafted in layers, with each layer representing three months of waste emplacement. The as-built back fill maps shall be included in the annual report.

- Fencing and berms would be constructed in accordance with Mitigation and Monitoring Plan (BLM 1997c) to deter unauthorized access, and prevent access by wildlife and livestock during backfilling.

- The LVMC will utilize a certified weed-free seed mix that when fully established, will provide a self-sustaining plant community that is reflective of pre-disturbance vegetation. The sagebrush/perennial grassland seed mix in the table below will be used on all reclaimed surfaces.

Sagebrush/Perennial Grassland (Sandy Soils) Seed Mix

Common Name	Scientific Name	Drill Seed Application Rate (pounds/acre)
Indian Ricegrass	*Oryzopsis hymenoides*	3
Blue Grama	*Bouteloua gracilis*	0.5
Bottlebrush Squirreltail	*Sitanion hystrix*	1
Galleta	*Hilaria jamesii*	2

Common Name	Scientific Name	Drill Seed Application Rate (pounds/acre)
Wyoming Sagebrush	*Artemisia tridentata ssp. Tridentate*	4
Winterfat	*Ceratoides lanata*	4

The application rates shown in the table above is based on 45 pure live seeds per square foot, drill-seeded to a depth of 0.25 to 0.5-inch, which is the method that will be used where feasible.

In areas that will not be drill-seeded, the seed mix will be broadcast-seeded at twice the application rate shown in the table above. If the site is harrowed or dragged, seed will be covered by no more than 0.25-inch of soil. No seeding will occur from April 15 to September 15. Dormant fall, winter, or very early spring seeding is preferred. Seed tags will be provided to the BLM prior to initiation of seeding activities.

- Where applicable, the mitigation techniques such as surface roughening and mulching will be used to keep water on site, thereby enhancing revegetation of the site and controlling erosion and runoff. All erosion control devices and materials will be installed and maintained to be fully functional until revegetation is determined successful by the BLM. Mulch, silt fencing, waddles, hay bales, and other erosion control devices will be used on areas at risk of soil movement from wind and water erosion.

- Mulch will be used if necessary to control erosion, create vegetation micro-sites, and retain soil moisture and may include hay, small-grain straw, wood fiber, live mulch, cotton, jute, or synthetic netting. Mulch will be free of mold, fungi, and free of invasive species and noxious weed seeds. If straw or hay mulch is used, it will contain fibers long enough to facilitate crimping and provide the greatest cover. The LVMC may investigate the use of hydromulch to facilitate and enhance reclamation efforts, if necessary.

- The LVMC will monitor reclaimed areas. Monitoring will be performed to ensure timely achievement of the long-term reclamation goals, to document accomplishments in achieving those goals, and to identify adaptive management needs. Actions will be taken to ensure that reclamation standards are met as quickly as reasonably practical.

PLAN CONFORMANCE AND CONSISTENCY:

The proposed action has been reviewed and found to be in conformance with the Moab Resource Management Plan (RMP), October 31, 2008. Specifically, the decisions made in the RMP that apply are as follows:

Page 73: Minerals Goals and Objectives

Provide opportunities for environmentally responsible exploration and development of mineral and energy resources subject to appropriate BLM policies, laws and regulations.

Page 74: MIN-6

Existing operations will continue to be subject to the stipulations developed for the notice of the plan of operations. The BLM will evaluate all operations authorized by the mining laws in the context of its requirement to prevent unnecessary and undue degradation of the Federal lands and resources. Consistent with the rights afforded claimants under the mining laws, operations conducted after this RMP will be required to conform to the surface disturbing stipulations developed in this RMP.

Page 74: MIN-7

Operations on BLM-administered lands open to mineral entry must be conducted in compliance with BLM's surface management regulations (43 CFR 3715, 3802, 3809, and 3814). BLM surface management regulations do not apply to operations on other Federal lands but do apply to split-estate lands.

The Proposed Action and alternatives are consistent with the goals and objectives of the San Juan County Master Plan. The San Juan County Plan emphasizes the importance of investing in a strong, diversified year-round economy. With respect to the mineral industry, the county would continue to support the growth and development of these industries as opportunities present themselves and new technologies develop.

Alternatives Considered: The EA considered three alternatives: Alternative A, the Proposed Action; Alternative B, Complete backfill; and, the No Action Alternative. Under the No Action Alternative, the proposed backfill would not take place; if the proposed mining activities were determined by the BLM to cause unnecessary or undue degradation of public lands. There is no new surface disturbance proposed under Alternative A and B. The inside of the berm and pit rim of the Centennial Pit is 176 acres. Complete backfilling would reclaim an additional 55 acres for a total acreage of 231 acres.

Rationale for Decision: Alternative B, the Complete Backfill alternative is selected because surface disturbance will be limited to the minimum to accomplish the purpose and need while attaining the minimum elevation to protect water resources. The selective handling of the waste rock includes removal of acid generating material from the pit area and having it encapsulated on the surface. Backfilling should proceed to 10 feet above grade with approved backfill materials so the final configuration would attain at least 75 percent bed 14 material. Alternative B will be conducted in accordance with the performance standards outlined at 43 CFR 3809.420 and would not create unnecessary or undue degradation of public lands.

The partial backfill alternative, Alternative A, was not selected because of the final configuration results in a topographic depression requiring monitoring and maintenance. The topographic depression may have resulted in seasonal ponding and require berms and fences to mitigate physical hazards and waste water runoff.

The No Action Alternative was not selected because the mined-out Centennial Pit would still be left open and un-reclaimed, with the likelihood of a pit lake forming. A 3-foot berm would be constructed around the mined pit within 50 feet of the pit edge, designed to drain surface water runoff away from the pit and discourage access. In the case of pit lakes forming, groundwater impacts to adjacent and lower groundwater aquifers could occur due to (1) evapoconcentration of solutes (e.g., metal oxyanions such as antimony, arsenic, cadmium, copper, molybdenum, selenium, uranium, and zinc), (2) high TDS, and (3) high pH levels. In addition, wildlife (principally water fowl) would be attracted to and therefore exposed to any pit lake that would form. Long-term testing of post-mining pit lake water would be required under the No-action alternative.

In accordance with regulations found at 43 CFR 3890.411(c), the BLM solicited input regarding the Proposed Action through a scoping and public review process through a press release and as a legal notice in the San Juan Record that appeared in the San Juan Record on April 15, 2014. The scoping period began on April 9, 2014 and ended on May 12, 2014. The EA was made available for a 30 day public comment period was from July 31, 2015 to August 30, 2015.

Protest/Appeal Language

If you are adversely affected by this decision, you may request that the BLM Utah State Director review this decision. If you request a State Director Review, the request must be received in the BLM Utah State Office at 440 West 200 South, Suite 500, Salt Lake City, Utah 84101-1345, no later than 30 calendar days after you receive or have been notified of this decision. The request for State Director Review must be filed in accordance with the provisions in 43 CFR 3809.805. This decision will remain in effect while the State Director Review is pending, unless a stay is granted by the State Director. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

If the State Director does not make a decision on your request for review of this decision within 21 days of receipt of the request, you should consider the request declined and you may appeal this decision to the Interior Board of Land Appeals (IBLA). You may contact the BLM Utah State Office to determine when the BLM received the request for State Director Review. You have 30 days from the end of the 21-day period in which to file your Notice of Appeal with this office at 82 East Dogwood Avenue, Moab, Utah 84532 which we will forward to IBLA.

If you wish to bypass a State Director Review, this decision may be appealed directly to the IBLA in accordance with the regulations at 43 CFR 3809.801(a)(1). Your Notice of Appeal must be filed in this office 82 East Dogwood Avenue, Moab, Utah 84532 within 30 days from receipt of this decision. As the appellant you have the burden of showing that the decision appealed from is in error. Enclosed is BLM Form 1842-1 that contains information on taking appeals to the IBLA.

This decision will remain in effect while the IBLA reviews the case, unless a stay is granted by the IBLA. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Request for a Stay

If you wish to file a petition pursuant to regulations 43 CFR 4.21 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by Interior Board of Land Appeals (IBLA), the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of this notice of appeal and petition for a stay must also be submitted to each party named in the decision and to the IBLA and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal must show sufficient justification based on the following standards:

1. The relative harm to parties if the stay is granted or denied.
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

Beth Ransel

Beth Ransel, Field Manager

10/16/15

Date