

Azurite, Inc.
10001 CR 12 P.O. Box 338
Cotopaxi, Colorado 81223
719-942-4178



September 20, 2013

Mr. David Ohori
State of New Mexico
Mining and Minerals Division
Pinon Building
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Permit # RA003ME Request for modification of closure plan

Dear Mr. Ohori,

By receipt of this letter, please consider this application for modification to closure plan for the Cullum Claims mine site. The Pueblo of Santa Clara at a duly called meeting on September 20, 2013 approved the plan for submission to the NM State Mining and Mineral Department. A \$250.00 filing fee is included with this mailing.

Please contact me if there are any outstanding issues that need to be addresses prior to agency review of this application. If you have any questions, do not hesitate to contact me. Thank you.

Very Truly Yours,

A handwritten signature in blue ink, appearing to read "Kenneth S. Klco".

Kenneth S. Klco
Consulting Geologist and Agent for Santa Clara Pueblo

PERMIT NO. RA003ME
CULLUM CLAIMS MINE
MINIMAL IMPACT EXISTING MINING OPERATION
APPLICATION FOR PLAN MODIFICATION

Submitted on behalf of:

Santa Clara Indian Pueblo

P.O. Box 580

Espanola, NM 87532

Prepared by:

Azurite, Inc.

P.O. Box 338

Cotopaxi, CO 81223

September , 2013

Site History and Modification to Plan Objectives

In 1999, a revegetation plan for the 117 acre Cullum Claims mine site was submitted to Mining and Minerals staff addressing closure reclamation work needed to meet requirements of the New Mexico Mining Act. The approved Permit Application Package dated October 18, 1999, including correspondence subsequently submitted to MMD referred to “Binder #1 – PAP for the Cullum Claims Mine”, was prepared by MFG, Inc., Albuquerque, NM, on behalf of La Farge, Inc. Since that time, the property has been acquired by the Santa Clara Indian Pueblo, Espanola, NM, as part of their long term efforts to consolidate land ownership in Rio Arriba County, New Mexico. The Santa Clara Indian Pueblo has completed acquisition transactions of all lands contiguous to the mine permit area. In addition, access to this site has been strictly enforced by fencing, locked gates, and written approval only by the Santa Clara Pueblo Governor’s office. Puye Road (BIA 601), a gated and patrolled road, is the only overland access roadway to this property.

As stated in the 1999 PAP, this site has not seen mining or surface disturbance since the 1970’s. In the past thirty to forty years, sizeable (up to 20cm in diameter and 6 m in height) Ponderosa Pine and Juniper trees have established themselves within the former pit floor. Large shrub specimens two to three meters in diameter populate the margins of the pit floor near the vertical highwall faces. Along the highwall contacts, a one to two meter alluvium of coarse volcanic tuff has been deposited from the slow aggradation of the tuff bedrock exposed at the highwall contact. This coarse tuff is well drained as well as moisture retentive, allowing for relatively robust growth of shrubby species in these areas. In August, 2009, six 50’ transect lines were analyzed for vegetative cover at various locations within the former pit floor area. Total ground cover results were in the range of 40%, confirming vegetative cover calculations made ten years prior during the MFG, Inc. site review. The 2009 cover work was performed similar to the 1999 work, utilizing a “point-step” method as described in the Draft Closeout Plan Guidelines (New Mexico Energy, Minerals and Natural Resources Department, MMD, 1996). While the pit floor areas appeared to have acceptable level of total cover, species diversity remained questionable. The south facing overburden slopes located in the northern and south-southwest portion of the permit area displayed notably limited species diversity, namely rabbit rubberbrush (*Chrysothamnus nauseosus*) with small scale (10cm deep), albeit easily discernable vertical rills (erosional) present throughout the overburden slope areas. The two areas combined total less than one acre of land. Nonetheless, they represent a defined area displaying unacceptable levels of slope stability as well as plant diversity.

Plan Modification Proposal and Justification

The Santa Clara Pueblo proposes to forego all highwall removal plans outlined in the 1999 Plan Modification proposed by La Farge, Inc., the former land owner. The south and east facing highwall zones currently exposed within the permitted site will be left “as is” is justifiable for a number of reasons, including:

- The highwall faces, now thirty to forty years since originally disturbed, show no sign of structural de-stabilization. They remain for the most part free of joint or cleavage planes of weakness, weathering, or deterioration. The tuff material weathers relatively slowly, producing a coarse alluvium which collects at the base of the highwall contact. This micro-site of moisture retaining media has resulted in vegetative development along the highwall contact areas which would be buried in the event of highwall removal efforts. The highwalls are not incongruent with nearby natural rock faces and exposures of similar bedrock lithologies. They are stable and visually “fit in” with the existing surroundings and removal efforts would negatively affect the established vegetative aspects of the site which has developed over the past three decades.
- This site is surrounded by Santa Clara Pueblo lands that are highly restricted regarding access. The reclaimed mining pits and surrounding pinon-juniper are not open to public or private motorized recreational use. Other than signage, no other administrative control is necessary.
- Cost Justification—the highwall reduction costs estimated in the 1999 close out plan do not adequately reflect present day cost of bulldozer, drill, and blasting costs associated with these tasks. The highwalls are acceptable to the Pueblo as is and do not present a hazard or dangerous condition to private or public visitors due to lack of access and a high degree of administrative control at the site. Santa Clara Pueblo available funds are better spent on addressing unstable areas and vegetative improvements.
- Environmental Justification—the highwall reduction work as described in the 1999 plan will disturb a well established shrub and tree covered pit floor with well developed grasses and forbs. The cost to replace the sizeable amount of vegetation alone that would be disturbed, buried, or removed during the course of highwall removal operations is more than justification for not disturbing this area any more than it already has been. The area has revegetated itself to a vegetative level of cover that is close to pre-disturbance level estimates. The plan modification proposal includes only a small area for re-grading(less than 2 acres) and broadcast seeding of local native grass species over 35 acres of former mine site land.

Plan Modification Detail

During the summer of 2009, the site was inspected for signs of unstable slopes left from mining operations. Besides the highwalls located along the northwest aspect of the site, two- one acre south facing slopes were identified and mapped as showing unstable soil conditions such as presence of vertical rills, channels, sediment fans and low plant diversity. The slopes appear to be remnants of overburden material left at near angle of repose. The two elongate one acre areas will be graded to 3:1 slope to the south prior to finish grading the slopes with contour furrows using a bulldozer ripper and blade. The overburden material is a coarse soil and fines mixture derived from volcanic tuff, with < 5% rock fragments up to 2.5cm diameter. Soils were sampled and composited for analysis. The newly graded and contour furrowed slopes will be broadcast seeded with a grass mix at a rate of 20PLS/acre and mulched with clean straw mulch at a rate of 3000#/acre. Contour furrows will be maintained by hand for the first few seasons until grass establishment has occurred. Furrows normally need little to no maintenance but should be inspected and maintained after large storm events and snowmelt for the first couple of years. Additional broadcast seeding and mulching is expected for two years succeeding initial work scheduled for 2013. Grading operations will be limited to minimize impacts to existing tree and shrub establishment that has occurred along former pit floors. A couple of small product piles within the pit area have "self-reclaimed" with now mature trees and shrubs near the base of the mostly grass covered mounds. These areas will be disturbed as little as possible and may see only broadcast seeding and mulch application. Contour furrows will be installed with D-6 or smaller bulldozer at no more than 18" in vertical change from one furrow crest to the next. Broadcast seeding and mulch operations will commence as soon as possible after final grading operations. Seed and mulch will be applied early summer or late fall. In 2013, a broadcast seeding of the former pit floor and all areas that appear to have been disturbed within the past thirty years is planned. This one time seeding will cover approximately 35 acres. Mulch application is recommended but not critical as most of these areas have at least partial ground cover and duff development. Application rate of 1500-2000#/acre with clean straw mulch would be optimum. Fertilization will follow recommendations from UNM soils lab.

Old mining equipment and all trash will be removed from the site. Tribe has option to remove all metal equipment at site. Access roads within the permit area will also be seeded and mulched to promote vegetation. Signage (minimum of 16) warning of mining highwalls and fall danger will be posted above and below the areas in question. Fences, locked gates, berms and oversized ditches will be maintained and continually used to support the restricted entry status of the property.

Stormwater Management Plan

The 117 acre site consists of rolling juniper and pinon hills incised by numerous arroyos. The flat bottomed pit floor dominates the drainage as no surface water apparently flows from the pit area. The coarse texture of the soil materials derived from volcanic tuff results in a high percolation rate of any meteoric water. No major watershed areas drain into the pit footprint. Given the past thirty years of existing conditions with no evidence of storm discharges from the pit areas, no change is anticipated. Monitoring and inspection will be continued to maintain the zero sediment and storm discharge condition. La Farge Road, a jeep trail structure which crosses the property in the southeast corner will be maintained for access and storm event control as needed.

Reclamation Cost Estimates

Mobilize, operate bulldozer to finish grade specifications at Lafarge site	\$10,000.00
Purchase seed 150# @\$500 and mulch 10 tons@\$200 a ton, mulch machine cost\$10,000.00	
Labor to apply seed, mulch over 35 acres	\$ 7,000.00
<u>Total Reclamation Liability Estimate</u>	<u>\$27,000.00</u>

Timetable for Reclamation Activities

Fall-2013—Re-grading of two one acre sloping areas to 3:1 slope where practical and finished with contour furrowing technique applied at no more than 18” vertical distance between furrow crests. Broadcast seed mixture at 20#/acre and straw mulch applied at 2000#/acre. Fertilizer will be applied at rate recommended by NMSU soils laboratory. Seed mix will be broadcast over 35 acres of reclaimed mining ground that has re-vegetated over time but reflects limited plant diversity. The broadcast rate over these areas will be no less than 10#/acre.

2013-2017

Monitoring and maintenance as needed to promote grass and shrub establishment and development . Maintain existing zero sediment or storm discharge condition.

2017

Perform vegetation studies to monitor plant density and diversity parameters on site. A third party biologist with field experience regarding vegetative monitoring techniques should be employed. Results of field monitoring will be reviewed and an action plan drawn up, if needed, to address any parameters not meeting minimum ground cover specification (40% cover) and species diversity requirements.

2017-2022

Monitoring and maintenance as needed to maintain present site conditions. Detailed inspection of highwall conditions will be documented to assure that the existing highwall faces are stable and safe. Administrative controls including fencing, restrictive ditches, berms, and signage will be inspected, replaced or maintained as needed, and inspections documented.

2022

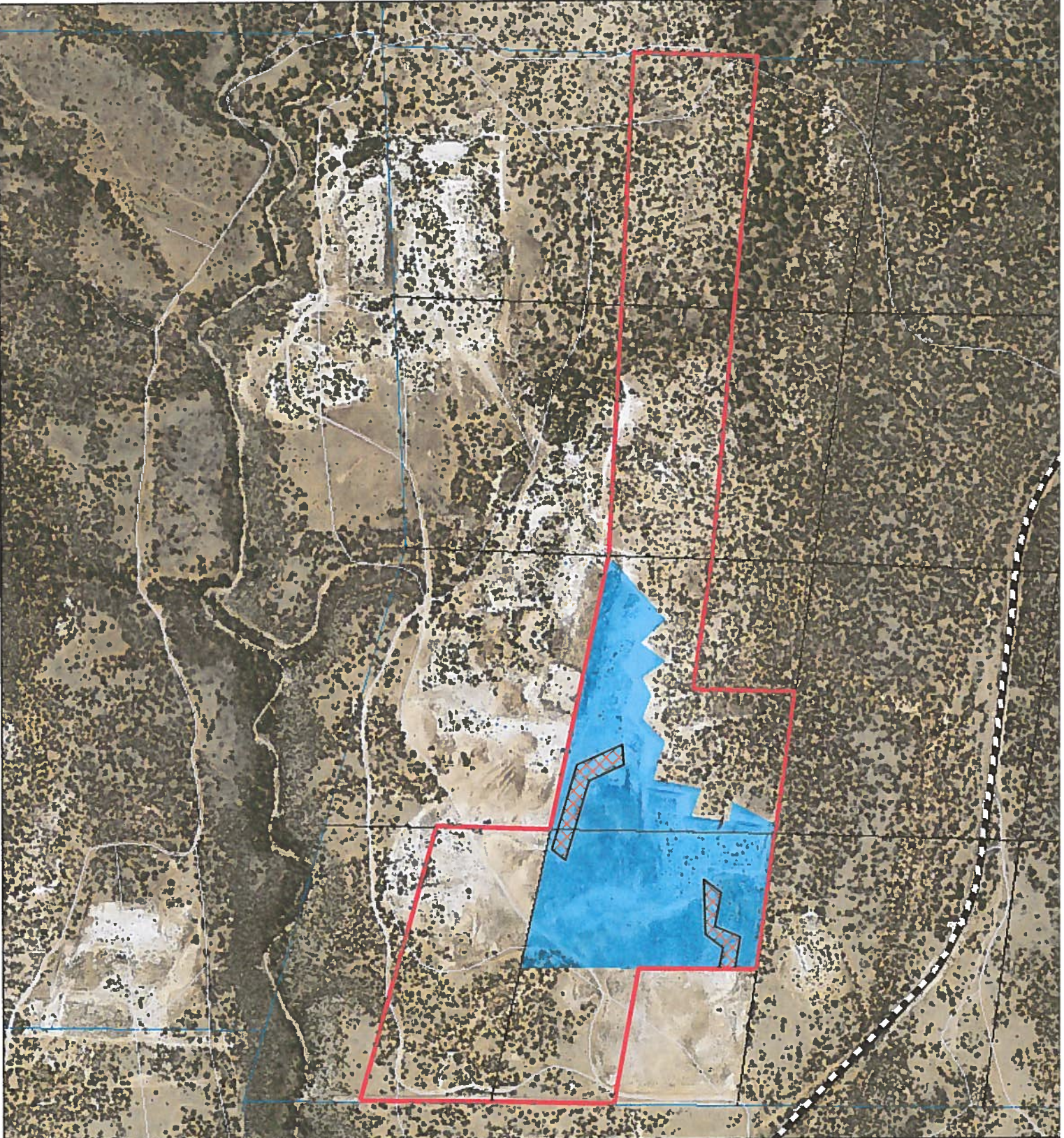
Vegetative studies performed as in 2015, preferably at same transect locations as performed in 2015.

2020-2023

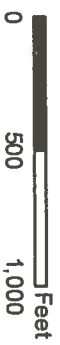
Monitoring and maintenance of site as needed.

2023

Final site inspection and release of surety bond on site. Termination of mining permit.



- PERMIT AREA
- LOCAL SERVICE ROAD
- STATE HIGHWAY 5
- SECTION LINE
- QUARTER LINE
- PROPOSED SEEDING AREA (35 ACRES)
- PROPOSED REGRADING AREA



RECLAMATION MAP

**Santa Clara Pueblo
Cullum Mine
S17 T20N R7E
Rio Arriba County, NM**

September 27, 2013
Aerial Photo NAIP 2011

Prepared for Azurite Inc.
by Gordon Kico

Ohori, David, EMNRD

From: Ken Klco <azurite@wildblue.net>
Sent: Monday, October 07, 2013 9:32 AM
To: Ohori, David, EMNRD
Subject: Santa Clara Seed Mix Proposed
Attachments: santa clara mix B.pdf

David,

I thought I'd send you a proposed mix we have developed for the Santa Clara site. We plan on broadcasting this mix at double the per acre rate over the disturbed areas and single rate over the established grassy pit bottom areas. Please let me know if you or any of the review team have a problem with mix as proposed. Thanks.

KSKlco

Azurite, Inc.

Option 2

Santa Clara Mix

<u>% by seeds</u>	<u>Species</u>	<u>Common Name</u>	<u>PLS Price</u>	<u>PLS/ac</u>	<u>Ext</u>
5.00%	Medicago sativa	Alfalfa	\$4.50	0.87	\$3.92
5.00%	Bouteloua curtipendula	Side-oats Grama	\$15.60	0.92	\$14.31
5.00%	Bouteloua gracilis	Blue Grama	\$35.00	0.21	\$7.39
20.00%	Festuca ovina	Sheep Fescue	\$2.85	1.32	\$3.75
20.00%	Dactylis glomerata	Orchardgrass	\$1.95	5.16	\$10.07
5.00%	Linum perenne v. lewisii	Blue Flax	\$11.00	0.59	\$6.50
5.00%	Melilotus officinale	Yellow Clover	\$2.65	0.68	\$1.79
10.00%	Oryzopsis hymenoides	Indian Ricegrass	\$12.00	2.47	\$29.66
5.00%	Schizachyrium scoparium	Little Bluestem	\$16.00	1.34	\$21.44
20.00%	Sporobolus cryptandrus	Sand Dropseed	\$5.25	0.13	\$0.70
100.00%			Total PLS/ac	13.69	
			Total Price/ac	\$99.53	