State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Cabinet Secretary

Mike Tompson, Interim Director
Mining and Minerals Division

September 16, 2019

MOI Recovery Systems, Attn: Paul Forshey, President
39 Leaf Circle
Crossville, TN 38558

RE: Agency Review Comments and Request for Additional Information, MOI Peru Mill Tailings Minimal Impact Exploration Project, Permit No. LU038EM – Luna County, New Mexico

Mr. Forshey:

The New Mexico Mining and Minerals Division ("MMD") has reviewed the Permit Application Package ("PAP"), for a minimal impact exploration permit, submitted by MOI Recovery Systems ("MOI"), under Subpart 3 of the New Mexico Mining Act Rules ("Rules"). MMD has also received agency comments on the August 16, 2019 submittal from MOI.

Enclosed with this letter are the reviewing agency comment letters submitted by the following state agencies: the New Mexico Environment Department ("NMED"), the New Mexico Office of the State Engineer ("NMOSE"), the New Mexico Department of Game and Fish ("NMDG&F"), and the New Mexico Department of Cultural Affairs - Historic Preservation Division ("NMDCA/HPD").

In addition to State and Federal agencies the Ysleta del Sur Pueblo has commented on the Permit No. LU038EM PAP. Please take the tribal comments into consideration during this process. Additionally, please find general comments from MMD based on review of this application. Attached to this letter are all comments from State and Tribal agencies.

General Comments:

MMD has reviewed the PAP and deemed it administratively complete, pursuant to §19.10.3.302 G NMAC, in a letter to MOI dated August 19, 2019. **However, MMD has reviewed the PAP and has found it to be *technically incomplete* pending receipt of acceptable supplemental information identified in this letter. Please respond no later than 30 days of receipt of this letter, to the information requested.**

MMD Comments:

Please respond to the following items:

1. Section 4.D says excess drill cuttings will be buried at each drill location. It's unclear how the tailings will be buried or used for backfill. Note that Section 6.D says a bentonite slurry will be used for borehole abandonment. Provide a schematic that shows typical placement of sealant, drill cuttings and cover material to backfill boreholes as well as a clarification on containment and disposal of excess drill cuttings.

2. Provide more explanation about the plugging plan of operation from Section 6.D with an emphasis on the sequence of placing sealant and removal of hollow stem auger flights. There is some concern about the holes staying open before sealant is placed. Some drillers place sealant through the interior diameter of the auger flights, then remove flights in 5-foot sections.

3. Section 7.D claims that there will be zero acres of disturbance. However, disturbance is likely with two trucks and one drilling rig. Please provide an estimate acreage of disturbance from overland travel, drilling activities, and any other disturbance, even if it seems minimal.

4. As a future permit condition, plastic will be required to be placed over the ground before drilling begins to contain all cuttings for proper disposal, reduced damage to vegetation, and prevent tailing cuttings from contacting the ground.

5. Option 3 in Section 6.D indicates 2 feet of top dressing or soil will be placed in borehole above sealant. Therefore, soil should be salvaged by being removed when drilling begins. The alternative is to bring in soil from another location. Please indicate where the 2 feet of soil per borehole will come from and if from the cover, how MOI plans on salvaging the soil.

6. MMD will require MOI to seed at the cessation of drilling. Therefore, MOI needs to propose a seed mix and application rates for the project. Alternatively, MOI may request that MMD propose a seed mix and application rates.

7. MMD recommends the use of a temporary surface casing (approximately 2.5-3 feet long) to prevent contact of the cover material in the borehole by tailings being brought to the surface by the auger. Please address.

NMED Mining Environmental Compliance Section, Ground Water Quality Bureau Comments ("MECS")

Please review the comment letter received by NMED MECS Ground Water Quality.

NMED Surface Water Quality Bureau Comments:

Please review the comment letter received by NMED Surface Water Quality Bureau.

NMED Air Quality Bureau Comments:

Please review the comment letter received by NMED Air Quality Bureau.

NMDCA/HPD Comments:

Please review the comment letter received by NMDCA/HPD.

NMOSE Comments:

Please review the comment letter received by NMOSE.

NMDG&F Comments:

Please review the comment letter received by NMDG&F and respond to the following concerns.

Should you have any questions, comments, or require additional information concerning this letter or any enclosures, please contact me at (505) 476-3436, or via email at: jennifere.johnson@state.nm.us.

Sincerely,

Jenn Johnson – Permit Lead, LU038EM
Mining Act Reclamation Program ("MARP")
New Mexico Mining and Minerals Division

Enclosures:

September 16, 2019 Letter to MMD from NMDGF
September 11, 2019, Letter to MMD from NMED
August 22, 2019 Letter to MMD from NMDCA/HPD
September 3, 2019 Letter to MMD from NMOSE
August 28, 2019 Letter to MMD from the Ysleta del Sur Pueblo

Cc w/o enclosures:

Holland Shepherd, Program Manager, MARP/MMD
Mine File (LU038EM)

NEW MEXICO
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau

1190 Saint Francis Drive / PO Box 5469
Santa Fe, NM 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965
www.env.nm.gov

Michelle Lujan Grisham
Governor

Howie C. Morales
Lieutenant Governor

James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

MEMORANDUM

Date: September 11, 2019

To: Holland Shepherd, Program Manager, Mining Act Reclamation Program

Through: Jeff Lewellin, Mining Act Team Leader, Mining Environmental Compliance Section

From: John Moeny, Surface Water Quality Bureau
Rhett Zyla, Air Quality Bureau

Subject: **NMED Comments, Peru Mill Tailing Project, Minimal Impact Exploration Project, Luna County, New Mexico, New Mexico Mining Act Permit No. LU038EM**

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on August 19, 2019 requesting NMED review and provide comments on the above-referenced MMD permitting action. In accordance with 19.10.3.302.G NMAC, NMED is providing comments within the 20-day comment period prescribed in the regulation. NMED has the following comments.

Background

Mr. Paul Forshey (Applicant) proposes a minimal impact exploration project to advance up to six, ten-inch diameter borings to a depth of 40 feet below the top of the mill tailing repository. The project is on land owned by the City of Deming in Section 18, T23S, R9W. The purpose of the proposed exploration project is not stated except to indicate the Applicant will evaluate for the presence or absence of base and precious metal through laboratory analyses of samples collected during exploration activities.

The Peru Mill Tailing site (Site) is composed of 59 acres of mill tailing associated with the former Peru Mill which primarily processed zinc sulfide ore. The Site is divided into two tailing impoundments with a five-acre northern and a 54-acre southern mill tailing impoundment. The mill tailing impoundments are associated with the former Peru Mill which operated from 1928

until 1967 and was remediated under the oversight of the Voluntary Remediation Program (VRP). Surface soils were determined to be the only environmental media requiring remediation at the facility. Consolidation of tailing and surface soils above the Site screening levels from across the Site was completed to contain the tailing and prevent tailing movement by water and wind erosion to other areas of the Site and/or off-site. An additional secondary tailing impoundment was added to the Site in 2005. The secondary tailing pile received tailing from removals conducted at additional properties within the former mill site (approximately 60 acres) and added to the Site in 2005 and 2006. The tailing piles are covered with a 30-inch cap; 24 inches of compacted soil with a 6-inch armoring of compacted cobble-sized gravel.

Two environmental easements were created by the City of Deming (COD) to protect the tailing piles and COD received Conditional Closure under the VRP. Under Conditional Closure, the site must be monitored, inspected, and engineering controls maintained by COD and can only be used for industrial/commercial use.

Air Quality Bureau

The Air Quality Bureau comments are attached under separate letterhead.

Surface Water Quality Bureau

The Surface Water Quality Bureau comments are attached under separate letterhead.

Mining Environmental Compliance Section (MECS)

MECS personnel reviewed the Office of the State Engineer (OSE) Points of Diversion (POD) database to evaluate the presence of ground water production wells in the area of the proposed project. One ground water production well is listed in the OSE POD database approximately .85 miles north of the tailing impoundment. The OSE POD database indicates a private, household well (M-03465) that is in the project area has a total depth of 200 feet below ground surface and the depth of ground water of 133 feet below ground surface. The total dissolved solids (TDS) concentration of ground water in the well is not stated in the application but it is assumed that ground water quality has a low TDS concentration for use as a household water supply. In the unlikely instance ground water is encountered while advancing the borings to the total depth of 40 feet below the top of the mill tailing repository, all plugging, and abandonment of the borings should comply with OSE regulations for wet holes. Otherwise, as indicated in the application, the borings will be abandoned in accordance with the OSE regulations for dry holes. No water will be used to advance the hollow stem auger/spilt spoon sampling borings.

In addition, the Applicant indicates that no reclamation will take place associated with the minimal impact exploration project. As indicated in the background section above, the two tailing impoundments do have a 30-inch cap; 24 inches of compacted soil with a 6-inch armoring of compacted cobble-sized gravel. The cap must be restored to preexisting conditions after

completion of abandonment of the borings and completion of the project. The abandonment procedures must include repair procedures in areas where borings have been advanced, and any disturbance or tracks caused by the drilling rig.

NMED Summary Comment

NMED finds that the exploration project is likely to have a minimal impact to the environment if operated and reclaimed with the approved permits, pollution controls, and the comments above.

If you have any questions, please contact Jeff Lewellin at (505) 827-1049.

cc: Shelly Lemon, Bureau Chief, SWQB
Liz Bisbey-Kuehn, Bureau Chief, AQB
Mike Tompson, Interim Director, EMNRD-MMD
Jennifer Johnson, Lead Staff, EMNRD-MMD
Kurt Vollbrecht, Program Manager, MECS
George Llewellyn, MECS

NEW MEXICO
ENVIRONMENT DEPARTMENT

Harold Runnels Building
1190 Saint Francis Drive, PO Box 5469
Santa Fe, NM 87502-5469
Telephone (505) 827-2855
www.env.nm.gov

Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

MEMORANDUM

DATE: September 10, 2019

TO: Jeff Lewellin, Mining Act Team Leader
Mining Environmental Compliance Section
Ground Water Quality Bureau (GWQB)

FROM: John Moeny
Watershed Protection Section
Surface Water Quality Bureau (SWQB)

RE: **Request for Comments, Minimal Impact Exploration Project, MOI Peru Mill Tailings Project, Luna County, MMD Permit No. LU038EM**

On August 19, 2019 NMED received a request for comments regarding a minimal impact exploration project targeting precious and base metals from the Peru Mill tailings impoundment located in Luna County northwest of Deming.

Summary of Proposed Action

The applicant, Mr. Paul Forshay, seeks to drill six, 10-inch diameter test holes to a depth of up to 40 feet on a reclaimed tailings impoundment located on lands owned by the city of Deming. The tailings impoundment contains acid-generating mine tailings beneath a layer of vegetated cover material that is fairly well established considering the arid climate. Excess core material will be buried on-site, although the application does not describe how this will be completed or what cover material will be employed to prevent exposure of the cuttings.

Recommended Best Practices to prevent surface water quality degradation

- Impacts by the drill rig or service vehicles to the revegetated cover material on the tailings impoundment should be reclaimed using appropriate seed mixes or coarse aggregate material to prevent future erosion

- Burial pits for excess cutting should be covered with suitable material that will promote vegetative growth.

- Drilling should be delayed if the cover material of the impoundment is wet or saturated from precipitation to prevent rutting and potential for future water channeling and erosion.

- Fuel, oil, hydraulic fluid, lubricants, and other petrochemicals must have a secondary containment system to prevent spills.

- Appropriate spill clean-up materials such as absorbent pads must be available on-site at all times during road construction, site preparations, drilling and reclamation to address potential spills.

- Report all spills immediately to the NMED as required by the New Mexico Water Quality Control Commission regulations (20.6.2.1203 NMAC). For non-emergencies during normal business hours, call 505-428-2500. For non-emergencies after hours, call 866-428-6535 or 505-428-6535 (voice mail, twenty-four hours a day). For emergencies only, call 505-827-9329 twenty-four hours a day (NM Dept of Public Safety).

Impacts to Surface Water Quality

The SWQB finds the applicants proposed exploration is likely to have a minimal impact to surface waters if operated and reclaimed with the approved permits and pollution controls and the comments above.

If you have any questions, please phone me at (575) 956-1545.

NEW MEXICO
ENVIRONMENT DEPARTMENT
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico, 87505
Phone (505) 476-4300 Fax (505) 476-4375
www.env.nm.gov

Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

MEMORANDUM

DATE: August 23, 2019

TO: Jeff Lewellin, Mining Act Team Leader
Mining Environmental Compliance Section, Ground Water Quality Bureau

FROM: Rhett Zyla, Environmental Scientist & Specialist - Air Quality Bureau

RE: Request for Comments, Minimal Impact Exploration Project, MOI Peru Mill Tailings Project, Luna County, MMD Permit No. LU038EM

The New Mexico Air Quality Bureau (AQB) has completed its review of the above-mentioned mining project. Pursuant to the New Mexico Mining Act Rules, the AQB provides the following comments.

Air Quality Permitting History

The AQB has not issued any air quality permits for this operation.

Details

MOI Recovery Systems, LLC., is requesting a minimal impact exploration permit to analyze tailings for precious and base metals at the Peru Mill Industrial Park, 4 miles north of Deming, Luna County, New Mexico. Exploration dates are anticipated October 8-12, 2019.

Mining occurred at this site in the early- to mid-1900s, in which two tailings piles, 5 acres and 54 acres in size, remain on site.

Applicant proposes to drill 6 borings, 10-inch in diameter, up to 40 feet deep, using one drill rig, two support vehicles, while not requiring drill pads. Existing roads will not be modified, and no grading/blading will be required for this phase of the project. Applicant anticipates no acreage will be disturbed.

Air Quality Requirements

The New Mexico Mining Act of 1993 states that "Nothing in the New Mexico Mining Act shall supersede current or future requirements and standards of any other applicable federal or state law." Thus, the applicant is expected to comply with all requirements of federal and state laws pertaining to air quality. Current requirements which may be applicable in this mining project include, but are not limited to the following:

Paragraph (1) of Subsection A of 20.2.72.200 NMAC, *Application for Construction, Modification, NSPS, and NESHAP - Permits and Revisions*, states that air quality permits must be obtained by:

"Any person constructing a stationary source which has a potential emission rate greater than 10 pounds per hour or 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Ambient Air Quality Standard. If the specified threshold in this subsection is exceeded for any one regulated air contaminant, all regulated air contaminants with National or New Mexico Ambient Air Quality Standards emitted are subject to permit review."

Further, Paragraph (3) of this subsection states that air quality permits must be obtained by:

"Any person constructing or modifying any source or installing any equipment which is subject to 20.2.77 NMAC, *New Source Performance Standards*, 20.2.78 NMAC, *Emission Standards for Hazardous Air Pollutants*, or any other New Mexico Air Quality Control Regulation which contains emission limitations for any regulated air contaminant."

Also, Paragraph (1) of Subsection A of 20.2.73.200 NMAC, *Notice of Intent*, states that:

"Any owner or operator intending to construct a new stationary source which has a potential emission rate greater than 10 tons per year of any regulated air contaminant or 1 ton per year of lead shall file a notice of intent with the department."

In addition, pursuant to Subsection A of 19.10.3.302 NMAC, *Minimal Impact Exploration Operations*:

"A minimal impact exploration operation will not exceed 1000 cubic yards of excavation per permit. Disturbances for constructed roads, drill pads and mud pits shall be no more than 5 acres total and will not be counted in the excavated materials. The type of road construction, the number and type of drill pads, and other disturbances when considered with site specific conditions will be major factors in determining eligibility for minimal impact status which is in the discretion of the director."

The above is not intended to be an exhaustive list of all requirements that could apply.

Fugitive Dust

Fugitive dust is a common problem at mining sites and this project will temporarily impact air quality as a result of these emissions. However, with the appropriate dust control measures in place, the increased levels should be minimal. Disturbed surface areas, within and adjacent to the project area, should be reclaimed to avoid long-term problems with erosion and fugitive dust. EPA's *Compilation of Air Pollutant Emission Factors, AP-42, "Miscellaneous Sources"* lists a variety of control strategies that can be included in a comprehensive facility dust control plan. A few possible control strategies are listed below:

Unpaved haul roads and traffic areas: paving of permanent and semi-permanent roads, application of surfactant, watering, and traffic controls, such as speed limits and traffic volume restrictions.

Paved roads: covering of loads in trucks to eliminate truck spillage, paving of access areas to sites, vacuum sweeping, water flushing, and broom sweeping and flushing.

Material handling: wind speed reduction and wet suppression, including watering and application of surfactants (wet suppression should not confound track out problems).

Bulldozing: wet suppression of materials to "optimum moisture" for compaction.

Scraping: wet suppression of scraper travel routes.

Storage piles: enclosure or covering of piles, application of surfactants.

Miscellaneous fugitive dust sources: watering, application of surfactants or reduction of surface wind speed with windbreaks or source enclosures.

Recommendation

The AQB has no objection to the current request for a permit from MMD.

This written evaluation does not supersede the applicability of any forthcoming state or federal regulations.

If you have any questions, please contact me at (505) 476-4304.

Michelle Lujan
Grisham
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

August 22, 2019

Jenn Johnson
Permit Lead, Mining Act Reclamation Program
Mining and Minerals Division
1220 South Saint Francis Drive
Santa Fe, NM 87505

Re: HPD Log# 111255, New Minimal Impact Exploration Permit Application, MOI Peru Mill Tailings Project, Luna, New Mexico, Permit No. LU038EM

Dear Ms. Johnson:

I am writing in response to your request for comment on the above referenced Minimal Impact Permit Application received at this office August 20, 2019.

Pursuant to 19.10.5.505 NMAC, Permit Modifications and Revisions, the Director shall determine whether a permit modification would have an adverse impact on cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties or be located in a known cemetery or other burial ground.

According to our files, there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties in the proposed Project area. There are also no known cemeteries or other burial grounds. Based on this information, this permit will have no adverse impacts to cultural resources listed on the National or State Registers. The Peru Mill Mine, however, is an historic property that is likely eligible for listing on the National Register of Historic Places. During the project care should be taken to not impact any standing structures at the site.

If you have any questions concerning these comments, please do not hesitate to contact me by phone at (505)-452-6115 or e-mail me at richard.reycraft@state.nm.us

Sincerely,

Richard Reycraft

Richard. Reycraft
Staff Archaeologist

MEMORANDUM
OFFICE OF THE STATE ENGINEER
Hydrology Bureau

DATE: **September 3, 2019**

TO: **Jennifer Johnson, Permit Lead, Mining Act Reclamation Program ("MARP")/MMD**

THROUGH: **Ghassan Musharrafieh, Ph.D., P.E., Chief, Hydrology Bureau**

FROM: **Katie Zemlick, Ph.D., Hydrology Bureau**

SUBJECT: **Review and Comments, Minimal Impact Exploration Permit Application, MOI Peru Mill Tailings Project, Luna, New Mexico, Permit No. LU038EM**

I. Introduction

On August 19, 2019, State of New Mexico Energy, Minerals and Natural Resources Department requested the Hydrology Bureau of the Office of the State Engineer (OSE) to review and comment on Minimal Impact Exploration Permit Application, MOI Peru Mill Tailings Project ("MOI"), Luna County in T23S, R9W, Section 18 (Permit No. LU038EM). The project intends to explore the Peru Mill Tailings Dump (PMTD) to evaluate subsurface conditions and determine whether marketable commodities (precious and base metals) are present. This proposed activity is scheduled between October 8 and October 12, 2019.

The PMTD Site is a 160 acre property located approximately 4 miles north of Deming, NM. The area once housed the Peru Mill, which processed zinc ore between 1928 and 1967. Post-processing ore slurry was stored in a tailings impoundment on site. At an undefined time, the impoundment failed and tailings spread beyond site boundaries. The tailings were eventually gathered and placed back in two tailings piles. After the site was remediated, it was annexed by the City of Deming as part of the 1,420 acre Peru Mill Industrial Park and zoned for a wide range of manufacturing and industrial applications.

The MOI application proposes to drill six exploratory borings (approximate 10" outside diameter) into the two tailings piles (5 into the southern pile and one into the northern pile) to a maximum depth of 40' using a hollow stem auger. Project site surface elevation ranges from approximately 4,400' to 4,430' NGVD across PMTD boundaries with highest elevation occurring at the top of the tailings piles. The exploratory target is the actual tailings material, thus borings are expected to extend only about 3' into native soils below the piles (as stated in the scope of work (SOW) (Gavreau GeoEnvironmental Group Inc., 2019) included with the application). No dewatering is described and water for drilling will be supplied off-site from a fire hydrant.

II. Comments

Surface Water:

The project site is located approximately 0.4 miles north of the Mimbres River in the central portion of the watershed of the same name. However, the Mimbres River rarely flows past the City of Deming, typically ending 10 miles to the East.(Cuddy and Keyes, 2011).

The closest natural springs are located 14 miles to the southeast and northeast, in the Little Journada Mountains and Cookes Range respectively.

The proposed activity is not expected to encounter, consumptively use, or otherwise affect the availability of surface water.

Groundwater:

The City of Deming operates three monitoring wells on and near the site. Measured depth to water (DTW) ranges from 107' to 126' as cited in the LU038EM application. These wells could not be identified in the NMOSE-NMWRRS database.

Water wells may tap locally-perched groundwater, water-bearing channel alluvium, or a regional groundwater system. All represent forms of groundwater subject to the application of NMOSE regulations and require Water Rights Division filings. Information regarding current water rights in the project area was retrieved from the NMOSE-NMWRRS database within a one-to-two mile radius of the planned exploratory drilling:

a. Three NMOSE-NMWRRS database entries representing points of diversion (PODs) associated with NMOSE water right filings were noted to exist within the project boundaries:
    i. **File M-00271**, City of Deming, mining use well, permit to divert 441.9 AFY, no well information available.
    ii. **File M-00272/M-00273**, City of Deming, irrigation use well, license to divert 409.3 AFY, no well information available.
b. In the area within a one-mile radius of the project site, three additional wells were identified. All are domestic but only one (M-03465) had DTW information (133').
c. In the area within a two-mile radius of the project site, 80 wells were identified. DTW in these wells ranged from 86' to 160' with an average of 133'.

The shallow drilling through tailing pile thickness appears unlikely to encounter groundwater based on information from deeper local water well drilling on file with NMOSE-NMWRRS. It should be noted that the applicant lists maximum borehole depth of 40' in their application but the included SOW (Gavreau GeoEnvironmental Group, Inc., 2019) describes maximum depth as 35'. For the purpose of this evaluation, the greater of the two values and that stated in the permit application (40') was used. It appears that even if drilled down from natural local ground surface, the proposed 40' boreholes would terminate well above the regional water table.

Mineral exploration borings (NMOSE's "mine drill holes") that do not encounter water were specifically exempted from the NMOSE's Title 19 Chapter 27 Part 4 regulations regarding well driller licensing and construction, repair and plugging of (water) wells as of June 30, 2017. Should natural groundwater be encountered during the course of drilling, the applicant will be required to obtain a Well Driller License issued by NMOSE per 19.27.4 NMAC (refer to attachment "General Concerns Related to NMOSE Regulation of Exploratory Borehole Drilling Encountering Groundwater and Associated Plugging of these Borings").

Exploratory borehole abandonment:

MMD regulations (19.10.3 NMAC) prevail over those of NMOSE (19.27.4 NMAC) if groundwater is not encountered during exploratory drilling. In the event that drilling does encounter groundwater, the applicant is required to submit a "Well Plugging Plan of Operations" to NMOSE for approval. Additional details regarding well plugging requirements under 19.27.4 NMAC are included in the attached document ("General Concerns Related to NMOSE Regulation of Exploratory Borehole Drilling Encountering Groundwater and Associated Plugging of these Borings").

If the tailings piles have been situated atop an engineered low-permeability underlayment, it is suggested that during hole abandonment, specific effort be made to reestablish integrity of the breached barrier with sealant column placed fully to maximum depth drilled.

References

Cuddy, A.S. and Keyes, E. (2011). Groundwater Model of the Mimbres Basin, Luna, Grant, Sierra and Dona Ana Counties, New Mexico. New Mexico Office of the State Engineer. Hydrology Bureau Technical Report 11-1.

General Concerns Related to NMOSE Regulation of Exploratory Borehole Drilling Encountering Groundwater and Associated Plugging of those Borings

Well drilling activities - including mineral exploration borehole drilling ("mine drill holes") that penetrate a water-bearing stratum - and well plugging, are regulated in part under 19.27.4 NMAC (New Mexico Administrative Code). Most recently promulgated 6/30/2017, these regulations require any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the NMOSE (New Mexico Office of the State Engineer). Therefore, a New Mexico licensed Well Driller shall perform the drilling and plugging of exploratory boreholes that encounter groundwater.

Exploration drilling where a water-bearing stratum is encountered will be subject to pertinent sections of 19.27.4 NMAC, including but not limited to Sections 19.27.4.30.C NMAC for plugging and abandonment of non artesian wells / borings; 19.27.4.31 NMAC for artesian wells / borings; and 19.27.4.36 NMAC for mine drill holes that encounter water. A complete version of the NMOSE 19.27.4 NMAC regulations can be found on the NMOSE website at: http://164.64.110.134/parts/title19/19.027.0004.html . The Mining and Mineral Division (MMD) will likely place additional conditions on the drilling and plugging of all mineral exploration borings via the MMD project permit.

All onsite drilling and plugging activities where groundwater is encountered shall be conducted under the supervision of the New Mexico-licensed Well Driller or a NMOSE-registered Drill Rig Supervisor under the direction of the licensed Well Driller.

Additional NMOSE filings will be required where it is requested that an exploratory borehole be converted to a water well. The well design and construction shall be subject to the provisions of 19.27.4 NMAC Regulations. Appropriation of water from such a conversion may require a water right. **The MMD may disallow the conversions of exploratory borings to water wells if not permitted specifically in the MMD permit.**

Use/extraction of Temporary Casing

When drilling through caving overburden or unconsolidated geologic units, use of temporary casing may be desired. Any temporary casing should be installed with the full intention of its removal before well plugging, therefore it should be inserted into a borehole of sufficiently large diameter to allow easy extraction upon termination of drilling. NMAC 19.27.4 regulations dictate methodology for the installation of permanent well casing, including the installation of required annular seal, should that option be prudent.

If temporary casing lacking an appropriate annular seal becomes stuck in-place, the potential for commingling of aquifers or surface water drainage may occur via an unsealed annulus. In these cases, remedial casing perforation and squeeze-cementing may be required as part of the well decommissioning. Steps should be taken to prevent deleterious fall-in or drainage of cuttings/sediments into the annulus outside the temporary casing to best allow for full retrieval and proper borehole plugging.

When setting of temporary casing occurs or is expected, appropriate detail of the proposed casing extraction and borehole clean-out process prior to plugging will be required in the NMOSE *Well Plugging Plan of Operations* form.

Exploratory Borehole Plugging

Terms of borehole plugging will be established jointly by the evaluation of the NMOSE *Well Plugging Plan of Operations* and the review of the relevant MMD application for water-bearing boreholes. Approved high-solids bentonite abandonment-grade sealants and/or approved cement slurries will be required for plugging as deemed hydrogeologically appropriate by the agencies. If the exploratory borings do not encounter groundwater, MMD plugging regulations (19.10.3 NMAC) prevail over those of 19.27.4 NMAC.

NMOSE well plugging regulations require tremie placement of the column of well sealant, which shall extend from the bottom of the borehole to ground surface. The NMOSE defers to the discretion of the MMD for the choice of sealant versus natural fill in the uppermost portion of a borehole plug to facilitate site restoration.

Required plugging of water-bearing exploratory borings shall occur within the timeframe specified by either the NMOSE or MMD to minimize cave-in and the potential for incomplete plugging due to blockages in the borehole.

Drill Rig Fuels, Oils and Fluids

Drill rigs contain and consume fuels, oil, and hydraulic fluids, and are subject to leaks. Drill rigs often remain in-place longer than other pieces of exploration equipment onsite, are frequently running, and are positioned immediately above and adjacent to the open borehole. As a standard practice to prevent contamination and reduce site cleanup activities, it may be beneficial to use bermed, impermeable ground sheeting under the drill rig. Consideration of bermed containment volume sufficient to accommodate a high-intensity precipitation event is also a good practice.

GOVERNOR
Michelle Lujan Grisham

DIRECTOR AND SECRETARY
TO THE COMMISSION
Michael B. Sloane

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way, Santa Fe, NM 87507

Post Office Box 25112, Santa Fe, NM 87504

Tel: (505) 476-8000 | Fax: (505) 476-8123

For information call: (888) 248-6866

www.wildlife.state.nm.us

16 September 2019

Jenn Johnson, Permit Lead
Mining Act Reclamation Program
Mining and Minerals Division (MMD)
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: New Minimal Impact Exploration Permit Application, MOI Peru Mill Tailings Project, Luna County, New Mexico, Permit No. LU038EM; NMDGF No. 19327

Dear Ms. Johnson,

The New Mexico Department of Game and Fish (Department) has reviewed the proposed mill tailings exploration project referenced above. The operator is proposing to drill up to eight exploratory holes at the reclaimed Peru Mill tailings site to a maximum depth of 40 feet below ground surface. The Department, MMD, New Mexico Environment Department, and the operator conducted an inspection of the site on 10 September 2019. The Department provides the following recommendations to minimize impacts to wildlife and habitats.

Several active banner-tailed kangaroo rat *(Dipodomys spectabilis)* mounds were observed on the tailings reclamation near proposed drill site locations. The Department recommends that no drilling activities be conducted on active kangaroo rat mounds or within a 100 foot buffer zone around the mounds.

The invasive noxious weed African rue *(Peganum harmala)* was observed on the reclamation site. African rue thrives on disturbed sites and along roadsides. It is extremely drought-tolerant and will undergo rapid vegetative growth when soil moisture is available. African rue is extremely toxic to horses, sheep, cattle and humans, containing at least four types of poisonous alkaloids. In order to help control its spread, the Department recommends that any vehicles and equipment arriving on site be thoroughly cleaned of all visible dirt and mud in a manner that will help contain and control the potential spread of weed seeds. The operator should also initiate a weed monitoring program that includes a commitment to aggressive African rue control on the site.

The operator must provide a plan for post-drilling cleanup and reclamation, including disposal of any exposed mill tailings that remain after plugging the exploration drill holes. The Department also recommends that MMD inspect the site after drilling operations to determine if the amount of surface disturbance warrants reclamation, and that the operator be responsible for any reclamation or seeding that is necessary. The operator should also provide a native seed mix to MMD for approval in the event that reclamation work is needed.

Thank you for the opportunity to review and comment on the proposed exploration project. If you have any questions regarding this response, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 476-8159 or ronald.kellermueller@state.nm.us.

Sincerely,

Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

Ysleta del Sur Pueblo
Tribal Council

119 South Old Pueblo Road * P.O. Box 17579 * El Paso, Texas 79917 * (915) 859-8053 * Fax: (915) 859-4252

August 28, 2019,

Fernando Martinez, Director
Mining and Minerals Division
1220 South Saint Francis Drive
Santa Fe, NM 87505

Dear Fernando Martinez,

This letter is in response to the correspondence received in our office in which you provide Ysleta del Sur Pueblo the opportunity to comment on the Public Notice Groundwater Discharge Permits Proposed for Approval.

While we do not have any comments on the proposed undertaking and believe that this project will not adversely affect traditional, religious or culturally significant sites of our Pueblo and have no opposition to it; we would like to request consultation should any human remains or artifacts unearthed during this project be determined to fall under NAGPRA guidelines. Copies of our Pueblo's Cultural Affiliation Position Paper and Consultation Policy are available upon request.

Thank you for allowing us the opportunity to comment on the proposed project.

Sincerely,

Omar Villanueva
Tribal Council Assistant
Ysleta del Sur Pueblo
119 S. Old Pueblo Rd.
(915) 342-2557

ovillanueva@ydsp-nsn.gov

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd Leahy, JD, Ph.D.
Deputy Cabinet Secretary

Fernando Martinez, Director
Mining and Minerals Division

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AUG 23 2019
BY: Fmo J. Luera

August 19, 2019

Governor E. Michael Silvas
Ysleta del Sur Pueblo
P119 S. Old Pueblo Road
Ysleta del Sur Pueblo, TX 79917

Re: Request for Comments on Minimal Impact Exploration Permit Application, MOI Peru Mill Tailings Project, Luna County, New Mexico, Permit No. LU038EM

Dear Governor Silvas,

The Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals, and Natural Resources Department has received an application from MOI Recovery Systems to conduct a minimal impact exploration project under 19.10.3 NMAC of the New Mexico Mining Act (NMSA 1978, §69-36-1 et seq.). The proposed project is located in Luna County and will involve 6 boreholes with a depth of 30 feet on reclaimed mill tailings. The applicant anticipates disturbing approximately less than 1 acre associated with the exploration activities.

Minimal Impact exploration means disturbance will not exceed a total of 5 acres and limits impact to the environment. Operations must be completed in one year and reclaimed within two years, unless the permit is renewed. A new application for renewal would be required to extend exploration or reclamation beyond one year or to initiate further mining activities. Please see the attached map of the project vicinity. The application can also be viewed in its entirety by visiting the MMD web site at http://www.emnrd.state.nm.us/MMD/MARP/LU038EM.html.

An archaeological survey of the proposed exploration site is not required since the project occurs on private property. Please provide comments to MMD by 9/9/2019. Please contact me at (505) 476-3435, or Jenn Johnson of my staff at (505) 476-3436 or jennifere.johnson@state.nm.us with any questions or if you wish to meet to discuss the application.

Sincerely,

Fernando Martinez, Director
Mining and Minerals Division

Enclosure (Project Vicinity Map)

cc: Holland Shepherd, MARP Program Manager
Mine File (LU038EM)