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Ground Water Quality Bureau

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Deputy Secretary

MEMORANDUM

Date: November 15, 2019

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

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

From: Amber Rheubottom, Mining Environmental Compliance Section
Alan Klatt, Surface Water Quality Bureau
Rhett Zyla, Air Quality Bureau

Subject: **NMED Comments, 2019 Interim Closure/Closeout Plan, Old Stope Leach Mine, McKinley County, New Mexico Mining Act Permit No. MK009RE**

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on September 17, 2019 requesting NMED review and provide comments on the above-referenced MMD permitting action. In accordance with 19.10.5.506 NMAC, NMED reviewed the interim Closure/Closeout Plan (CCP). NMED has the following comments.

Background

The Old Stope Leach Mine is a former uranium mine, located 25 miles north of the town of Grants in the Ambrosia Lake area. As indicated in the CCP, the estimated areal extent of the impacted surface to be reclaimed is 2,948 acres. Conventional mining (underground mining) was performed at the mine from 1958 to 1985. From 1985 to 2002, uranium was recovered via ion exchange removal of uranium from recirculated mine water (Old Stope Leaching). The site is regulated by MMD under permit MK009RE and by NMED's Mining Environmental Compliance Section (MECS) through Discharge Permits (DP) DP-67, DP-71, DP-264, and DP-362.

Surface Water Quality Bureau

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

Air Quality Bureau

The Air Quality Bureau comments are attached under separate letterhead.

Mining Environmental Compliance Section

Personnel within MECS have reviewed the CCP and are providing comment to Rio Algom Mining, LLC ([current owner] RAML) by direct communication with inclusion of MMD by copy of the letter.

NMED Summary Comment

NMED will continue to cooperate with MMD and RAML during closure and reclamation of the Old Stope Leach Mine.

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

cc: Rebecca Roose, Director, Water Protection Division
Elizabeth Bisbey-Kuehn, Bureau Chief, AQB
Shelly Lemon, Bureau Chief, SWQB
Mike Tompson, Interim Division Director, EMNRD-MMD
DJ Ennis, Lead Staff, EMNRD-MMD
Kurt Vollbrecht, Program Manager, MECS



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MEMORANDUM

DATE: November 4, 2019

TO: Jeff Lewellin, NMED Mining Act Team Leader

FROM: Alan Klatt, Surface Water Quality Bureau

SUBJECT: Request for Comments, Old Stope Leach Mine Interim Closure/Closeout Plan, McKinley County, New Mexico, Permit No. MK009RE

The New Mexico Environment Department (NMED) – Surface Water Quality Bureau (SWQB) received a request for comments for the above referenced permit renewal application on September 20, 2019. The Old Stope Leach Mine refers to the “Old Stope Leaching Period” 1985-2002 where mine water was recirculated throughout the project area (25 miles north of Grants in McKinley County, New Mexico) and sent to ion exchange facilities at the Ambrosia Lake West mill for mine water recovery of uranium. Conventional mining period lasted between 1958-1985 and occurred with the production of large quantities of water being pumped and discharged to the surface. The interim Closure/Closeout Plan (CCP) estimates costs associated with closure and closeout activities and proposes to update Rio Algom Mining LLC (RAML’s)¹ financial assurance with the state of New Mexico at \$85,561,000. Radiological reclamation includes the removal of 6,341,382 cubic yards of soil above gamma guidelines to be transferred to onsite repository(s) in addition to grading and seeding. Pursuant to §19.10.5.506 New Mexico Administrative Code (NMAC), SWQB has prepared the following comments.

The Old Stope Leach Mine Interim CCP project area is located within Martin Draw (12-digit Hydrologic Unit Code 130202070302) and Arroyo del Puerto (12-digit Hydrologic Unit Code 130202070303). Martin Draw is a tributary to Arroyo del Puerto. In accordance with the State of New Mexico Standards for Interstate and Intrastate Surface Waters, the segments of both Martin Draw and Arroyo del Puerto that flow throughout the project area are subject to §20.6.4.98 NMAC and have designated uses that include livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact. The segment of Arroyo del Puerto that is subject to §20.6.4.97 NMAC begins downstream of the project area at T14N R9W S30 and is outside of the project area.

Comment 1: “Arroyo”, “other drainage”, and “overland flow” remedial activities should be further described and should consider the natural drainage prior to conventional mining and the potential impacts to the natural drainage associated with the production and discharge of large quantities of water. Accelerated erosion (downcutting, headcutting, lateral cutting)

¹ RAML acquired certain Ambrosia Lake properties in late 1988 through its purchase of Quivira from Tronox/KM.

that may have been initiated during conventional mining would require restoration to maintain and protect surface water quality.

Comment 2: If arroyo remediation is needed upstream or downstream of T14N R10W, Section 26, then upstream/downstream impacts should be assessed to assure the success of the remediation.

Comment 3: From Google Earth, it appears that there are multiple "on-line" stock ponds that are located in the stream channel and are connected to Arroyo del Puerto throughout the project area (e.g. T14N R10W Sections 22, 26 and T14N R9W Sections 17, 34). To measure reclamation success and to ensure that surface water quality standards will be met and will support the post mining land use, SWQB recommends sampling on-line stock ponds for adjusted gross alpha. The adjusted gross alpha water quality criterion for the designated use of livestock watering is 15 picocuries per liter as described under Subsection J of 20.6.4.900 NMAC.

For questions related to these comments, please contact Alan Klatt, SWQB, at 505-827-0388.



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MEMORANDUM

DATE: October 4, 2019

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

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

RE: Request for Comments, Old Stope Leach Mine Interim Closure/Closeout Plan,
McKinley County, New Mexico, Permit No. MK009RE

The New Mexico Air Quality Bureau (AQB) has completed its review of the above-mentioned mining reclamation Interim Closure/Closeout Plan. 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

Rio Algom Mining, LLC (RAML) owns parcels of land in the Ambrosia Lake Valley, approximately 25 miles north of Grants, New Mexico, that are associated with a former uranium recovery operation, in various sections of T14N R09W, T14N R10W, and T13N R09W.

Uranium recovery on the property was historically conducted by several entities, including those with no affiliation to RAML. Of specific interest to the submittal, RAML has five permits with the State of New Mexico related to historical Ambrosia Lake mining operations: MK009RE (issued by the New Mexico Mining and Minerals Division [NMMMD]) and Discharge Permits (DPs) -67, -71, -264, and -362 (issued by the New Mexico Environment Department [NMED]).

Uranium mining in the Ambrosia Lake Valley began in the late 1950s. RAML and its predecessors in interest conducted operations beginning in 1983. Today, none of the mines within the project area are operational, and, except for the Section 30W shaft, which is

currently used to conduct groundwater monitoring, all the mine shafts within the project area have been closed.

In 1985, the nearby Ambrosia Lake West Mill was placed on standby status and conventional mining and milling of uranium within the project area ceased. From 1985 on, uranium was recovered only via ion exchange removal of uranium from recirculated mine water (Old Stope Leaching or OSL).

Uranium recovery ceased in 2002, and RAML has no plans to resume mining.

Prior reclamation within the project area was completed under a closeout plan prepared by Quivira Mining Company (Quivira, 1999).

Project area closure activities have been planned to remediate operational surface impacts that are present within the project area and to restore disturbed areas to a livestock grazing habitat with utility access capacity. Livestock grazing or industrial use are the most likely future use scenarios for the project area. The closure goal is to reclaim to a range condition consistent in content and form to that of the surrounding area (Quivira, 1999).

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.”

The above is not intended to be an exhaustive list of all requirements that could apply. The applicant should be aware that this evaluation does not supersede the requirements of any current federal or state air quality requirement.

Fugitive Dust

Air emissions from this project should be evaluated to determine if an air quality permit is required pursuant to 20.2.72.200.A NMAC (e.g. 10 lb/hour or 25 TPY). 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:

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 reviewed the Interim Closure/Closeout Plan, and finds the proposed activities are likely to have minimal air quality impacts if the above recommendations are followed. The AQB has no objection to the request for the Closeout permit.

The applicant is expected to comply with all requirements of federal and state laws pertaining to air quality. 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.