



Michelle Lujan Grisham
Governor

Howie C. Morales
Lieutenant Governor

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



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

MEMORANDUM

Date: May 6, 2020

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

Through: Anne Maurer, Mining Environmental Compliance Section

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

Subject: **NMED Comments, Draft Reclamation Plan, Section 12 Mine, McKinley County, New Mexico Mining Act Permit No. MK046RE**

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on March 3, 2020 requesting NMED review and provide comments on the above-referenced MMD permitting action. The purpose of the NMED review is to provide comments related to the Section 12 Mine (Site) Draft Reclamation Plan (Plan) provided by the representatives of Southwest Resources, Inc. (Applicant). This Plan is a continuation of documents submitted by the Applicant for closure of the mine which has not operated since 1982. MMD requested comments on the Plan within 60 days of receipt in accordance with Section 19.10.5.503 C. NMAC. NMED has the following comments.

Background

NMED has been providing comments related to this Site since calendar year 2014. The Site is located in Section 12, T14N, R10W, McKinley County, New Mexico. The Site consists of an underground uranium mine that operated in three time periods: 1959; 1962; and, 1974 to 1982. Mining operations are currently inactive. The underground mine did encounter groundwater while advancing the shaft to a total depth of 700 feet below ground surface. NMED understands that previous mining operations did not involve dewatering. As the MMD permitting process has progressed, the applicant has been required to characterize soil contamination from previous mining operations, perform a supplemental hydrologic study, and provide additional information

in the closeout plan. This latest revision of the Plan moves the Site toward final closure with no additional mining proposed or anticipated based on the information submitted to MMD.

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 has the following comments:

1. Main Text, Section 2.2 – Please elaborate on the plans for the berm and ditch associated with the Arroyo del Puerto water right, during and following reclamation activities. Will the berm and ditch be repaired to direct all runoff to Arroyo del Puerto or will measures be put in place to direct all runoff to Ambrosia Lake? While the features may not be considered part of mining, their proximity to the Site warrants investigation. Were these features included in the radiological scanning and characterization work?

Are there any groundwater monitoring wells on the site? If so, please provide the most recent water quality results. If not, please provide information on the nearest groundwater well/s.

2. Main Text, Section 4.4 states all characterization has been done. NMED notes additional characterization may be needed based on the responses to MECS comments 1, 3, 8, and 9.
3. Main Text, Section 4.2.1 states 20 mrem/year level for offsite disposal. Has this been verified as acceptable to regional waste disposal facilities? NMED recommends the waste remaining on site be consolidated in one interior cell of the repository.
4. Main Text, Section 4.2.5 states some joint liability may be possible with the Dysart Mine. What communication has occurred with the Dysart Mine to date?
5. Main Text, Section 4.2.7.2 states a model was used to evaluate radon barrier and vegetative media thickness. Were site specific soil conditions or general parameters used for the model inputs?

6. Main Text, Section 4.2.11 – In the monthly reporting items, add an observational note on the water level in Ambrosia Lake. If possible, install a measuring device to provide an estimation of water depth.
7. Main Text, Figure 2 –A revised figure which also shows property ownership should be provided. Specifically, state who owns the section/s where stormwater discharge may occur.
8. Main Text, Figure 3 – Elevated concentrations of Radium 226 are shown outside of the mine permit boundary. Later sections of the Reclamation Plan suggests SRI will be addressing areas outside of the permit boundary. Please verify all areas of continuous elevated Radium 226 originating from activities within the permit boundary that will be addressed.
9. Appendix B, Figure 3-3 – In the southwest portion of the Site a linear feature with counts of 25-50 $\mu\text{r/hr}$ is evident at the edge of the investigation area. When doing site cleanup work, expand scanning approximately 100 m to the southwest of this area.
10. Appendix G – The Construction Quality Management Plan (CQMP) should be revised to include monthly reporting.
11. Appendix G, Earthwork – It is stated “Field density of compacted clay soil shall be measured not less than once per 2000 c.y. ...the fill material will be tested for moisture-density relationships and gradation/classification at least once per 5,000 c.y.” How will the material on site be handled in the time period between testing and when results are received? Will there be personnel on site capable of making field-based material distinctions between clay to be used as radon barrier and sandy/loam to be used as growth media prior to receipt of test results? The Plan should discuss whether field work will be delayed until lab results have been received and analyzed or if decision on whether material will be used as growth media or cover will be made in the field. Any field-based decision must be done according to well established protocol.

NMED Summary Comment

NMED recommends that additional information be provided before the final Reclamation Plan is approved.

If you have any questions, please contact Kurt Vollbrecht at (505) 827-1095.

cc: Shelly Lemon, Bureau Chief, SWQB
Liz Bisbey-Kuehn, Bureau Chief, AQB
Jerry Schoepner, Director, EMNRD-MMD

Holland Shepherd, Program Manager

May 6, 2020

Page 2 of 2

Clint Chisler, Lead Staff, EMNRD-MMD

Kurt Vollbrecht, Program Manager, MECS



**NEW MEXICO
ENVIRONMENT DEPARTMENT**

525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico, 87505
Phone (505) 476-4300 Fax (505) 476-4375



Michelle Lujan Grisham
Governor

www.env.nm.gov

James C. Kenney
Cabinet Secretary

Howie C. Morales
Lt. Governor

Jennifer J. Pruett
Deputy Secretary

MEMORANDUM

DATE: March 30, 2020

TO: Kurt Vollbrecht, Program Manager, Mining Environmental Compliance Section

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

RE: Request for Comments, Draft Reclamation Plan, Section 12 Mine, McKinley County, New Mexico Mining Act Permit No. MK046RE

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

Southwest Resources Inc. (SRI) has submitted its *Draft Reclamation Plan* (previous comments submitted by AQB on Applicant's precursor *Conceptual Reclamation Plan* summer 2019) for its Uranium Mine located at 35° 27' 17"N, 107° 51' 01"W in T14N, R10W, SW ¼ of Section 12, McKinley County, New Mexico adjacent to ephemeral Ambrosia Lake.

Currently inactive, the uranium mine had been operated intermittently from 1959 to 1982; a recent economic analysis by SRI deemed the mine uneconomic to operate. Following SRI's decision, MMD issued a Director's Order of Abatement on Consent (issued 12/16/2019) that requires SRI to reclaim the mine.

The Ra-226 levels in waste rock and affected soils average 17.3 pCi/g, a level above the background (1.41 pCi/g) + 5 pCi/g reclamation limit, averaged over the first 15 cm of soil below the surface, for which the soil must be removed or isolated from the environment.

In addition to soil reclamation, applicant will remove hoisting equipment, the two remaining support buildings, and will close the mine shaft.

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:

- Subsections A and B of 19.10.5.506 NMAC, and Subsection A of 19.10.5.507, *Closeout Plans*:

“A proposed closeout plan for all or a portion of the mine shall be based on site-specific characteristics and the anticipated life of the mining operation. Site-specific characteristics include, but are not limited to, disturbances from previous mining operations, past and current mining methods utilized, geology, hydrology and climatology of the area. Information previously submitted to the Director in the site assessment or permit application may be referenced to support the proposed closeout plan, provided that, if the information in the site assessment significantly deviates from conditions at the time of submittal of the proposed closeout plan, deviations shall be described in the application.”

“A proposed closeout plan or a proposed closeout plan for a portion of the mine shall include a detailed description of how the permit area will be reclaimed to meet the requirements of Section 69-36-11B(3) of the Act and the performance and reclamation standards and requirements of 19.10.5 NMAC.”

“The permit area will be reclaimed to a condition that allows for re-establishment of a self-sustaining ecosystem appropriate for the life zone of the surrounding areas following closure unless conflicting with the approved post-mining land use. Each closeout plan must be developed to meet the site-specific characteristics of the mining operation and the site. The closeout plan must specify incremental work to be done within specific time frames to accomplish the reclamation.”

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

Fugitive Dust

In addition to the Applicant addressing dust control measures in Section 6.13 of its *Draft Reclamation Plan* with respect to occupational exposure, the AQB has the following to add:

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 reviewed the *Draft Reclamation 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 to move forward with the Reclamation Plan, in lieu of a mine permit and closeout plan, under NMAC 19.10.5.506 and the environmental standards of the MMD/NMED Joint Guidance for the Cleanup and Reclamation of Existing Uranium Mining Operations in New Mexico.

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.



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Surface Water Quality Bureau

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



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

DATE: March 20, 2020

TO: Kurt Vollbrecht, Manager, Mining Environmental Compliance Section, Ground Water Quality Bureau

FROM: Alan Klatt, Watershed Protection Section, Surface Water Quality Bureau

SUBJECT: Request for Comments, Draft Reclamation Plan, Section 12 Mine, McKinley County, New Mexico
Mining Act Permit No. MK046RE

On March 3, 2020 Surface Water Quality Bureau (SWQB) received a request for comments regarding the subject application. SWQB provided comments regarding the Conceptual Reclamation Plan on August 22, 2019 and provided additional comments on November 20, 2019 to address the Applicant's response to the August comments. Pursuant to 19.10.5.503 (C) New Mexico Administrative Code (NMAC), SWQB has prepared the following comments:

To ensure compliance with 19.10.5.507 (A) NMAC and 20.6.4.98 NMAC, SWQB recommends that the Draft Restoration Plan explain how a safe setback distance between Lake Ambrosia and the repository was determined and describe the method for estimating the flood water level for Ambrosia Lake. The applicant should also avoid locating burrow areas within Ambrosia Lake and recontour old berms and ditches that are located within the permit boundary that aren't directly related to the repository. SWQB advises the applicant to confirm with the U.S. EPA and the U.S. Army Corps of Engineers whether or not the proposed reclamation activity requires permit coverage under Sections 402 and 404 of the Clean Water Act.

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