

Governor

JOHN A. SANCHEZ Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

Harold Runnels Building
1190 St. Francis Drive
P.O. Box 5469, Santa Fe, New Mexico 87502-5469
Phone (505) 827-2855 Fax (505) 827-2965
www.nmenv.state.nm.us



RYAN FLYNN Secretary

BUTCH TONGATE Deputy Secretary

RECEIVED

MINING & MINERALS DIVISION

MEMORANDUM

DATE:

May 8, 2014

TO:

David Clark, EMNRD

FROM:

David L. Mayerson, Ground Water Quality Bureau

Neal Butt, Air Quality Bureau

THROUGH:

Keith Ehlert, Acting NMED Mining Act Team Leader

RE:

Comments on Existing Mine Permit Application, Southwest Resources

Inc., Section 11/12 Mine, Permit Application MK046RE

The New Mexico Environment Department (NMED) received the Southwest Resources Inc. (SRI) application (Application) to permit the existing Section 11/12 uranium mine (Mine) from the Mining and Minerals Division (MMD) on February 27, 2014. New Mexico Mining Act (NMMA) rules require that NMED submit comments within 60 days of the date of receipt. The comment period was extended to May 8, 2014 and the following comments are now submitted to meet that deadline.

Pursuant to Subpart 302.G of the New Mexico Mining Act Rules (NMMA), the NMED Air Quality Bureau, Surface Water Quality Bureau, and Ground Water Quality Bureau have reviewed the Application. The Air Quality Bureau and Ground Water Quality Bureau are submitting comments jointly in this memorandum. The Surface Water Quality Bureau has no comments at this time.

Site Location and Description

The Mine is located in Sections 11 and 12, Township 14 North, Range 10 West, McKinley County, New Mexico, and consists of an underground uranium mine that operated in 1959 and 1962 and from 1974 to 1982. Mining operations are currently inactive. The Mine did not encounter ground water, and proposed uranium mining operations do not involve dewatering. According to the Application, ore would be mined upon market order for off-site processing, minimizing on-site storage.

Comments

- 1. In accordance with 20.6.2.1203 NMAC and as discussed in succeeding comments herein, NMED requires SRI to submit a plan and associated implementation schedule to clean-up existing surficial radiological contamination, as evidenced by elevated radioactivity levels in comparison to background, which is related to prior mining operations.
- 2. NMED considers the radiation survey information provided in the Application to be inadequate. Gamma survey values included in the application, as well as observations by NMED during a Site visit on March 13, 2014, indicate that material, apparently from the prior mining operations, with elevated radioactivity levels in comparison to two background location shown in Figure A3 of the Application occur in the vicinity of the existing mine facilities. The Application indicates that,

RE: Review comments on "NMAC 19.10.5.502 Existing Mine Permit Application" (Section 11/12 Mine Permit Application No. MK046RE; Domenici Law Firm, P.C., January 31, 2014)

May 8, 2014

except for the workers' quarters, radiation levels were surveyed locally at existing facilities at 20 foot intervals radiating in the four cardinal directions to various distances from the facilities. The survey locations are shown on Figures A3 through A6. The area around the workers' quarters was surveyed at eight locations, and reference is made to Figure A7 for the location of the survey points. NMED reviewed a paper copy of the Application provided by MMD, and an electronic copy on the MMD website. Neither copy contained Figure A7. It is not clear to NMED how the background radiation samples were chosen and whether they accurately depict background levels. NMED recommends that SRI provide a detailed radiation characterization plan for agency approval that includes information pertaining to background levels and how the background levels will be determined. The characterization should include all areas that were impacted by prior mine activities, including existing rock piles. The plan shall also include detailed procedures for removing and disposing of any materials that have radioactive levels above background. SRI is referred to the draft "Joint Guidance for the cleanup and reclamation of existing uranium mining operations in New Mexico," which presents guidelines for cleanup and reclamation of uranium mines in New Mexico. This can be viewed on the MMD website at: http://www.emnrd.state.nm.us/MMD/MARP/documents/2014-03 JointGuidelinesforExistingMinesandRadiationCleanup DRAFT.pdf.

- 3. During the March 13, 2014 site visit by representatives of NMED it was observed that a material pile is located approximately 50 feet northwest of the gamma radiation survey line adjacent to the apparent high water-mark of Ambrosia Lake. As discussed in Comment 1, NMED recommends that SRI provide a detailed radiation characterization plan for all existing facilities that include procedures for removing and disposing of any materials that have radioactive levels above background.
- 4. Figure 1 included with the Application indicates that the Section 12 shaft/headframe is located within the mapped footprint of Ambrosia Lake, and that the Section 12 vent and workers quarters are located immediately adjacent to Ambrosia Lake. NMED recommends that SRI provide a flood hazard evaluation for facilities within or immediately adjacent to the mapped footprint of Ambrosia Lake. The study shall include a hydrologic analysis and recommendations to mitigate any potential flood hazard from Ambrosia Lake that could impact existing or proposed facilities.
- 5. It appears to NMED that the section of the Application titled Mining Operation Site Assessment is meant to suffice for a mine operational plan. If this is the case, NMED considers the plan to be inadequate. An appropriate mine operational plan, which NMED recommends that SRI provide, should address the Applicant's plans for waste rock, ore handling, spill contingency, environmental sampling, quality assurance and storm water control, as well as mining techniques, operations scheduling, and site safety and security, among other issues.
- 6. The Application indicates waste spoils and ore will be stockpiled in a two acre staging area due east of the head frame. NMED recommends that SRI provide a characterization, handling, and storage plan for any materials, including the proposed length of time and maximum amount of ore that will be stockpiled. This plan, which could be included in the mine operational plan discussed previously, shall address such issues as the possible need for protection from high-water in Ambrosia Lake, storm water run-on and run-off controls, and possible need for lining of the storage areas.
- 7. Table 2 included in the Application provides depth to ground water as measured in wells within the vicinity of the Mine. However, no map showing the location of the wells relative to the mine is provided. During a site visit by representatives of NMED on March 13, 2014, a windmill tower was observed in Section 13 approximately one mile south of the Section 12 shaft/headframe. Additionally, Table 2 indicates Office of the State Engineer well record number B-00143 encountered relatively shallow water at a depth of 60 feet, and is located two to three miles from Dysart II Shaft/Headframe. These observations suggest that shallow alluvial water could be

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present in the area of the Mine. NMED recommends that SRI provide a regional geologic map which includes alluvium on a topographic base and clearly shows the locations of the wells referenced in Table 2, and that SRI perform a comprehensive evaluation of the potential for relatively shallow alluvial waters being present in the area of the Mine, and possible impact that the mining operation may have on alluvial waters if they are present. SRI's evaluation should include a potential relationship between water that was observed in Ambrosia Lake and possible shallow alluvial aquifers.

8. NMED considers the close-out plan included with the Application inadequate, especially with regard to characterization of the site after mining to identify target areas of radioactivity above background levels. The applicant is referred to the above-referenced draft guidance for information pertaining to the development of radioactivity survey. An adequate close out plan should include details pertaining to post-closure monitoring, inspections, maintenance and reporting, storm water management, and implementation schedule, among other issues.

Based on the information submitted in the Application to date, a determination cannot be provided that the applicant has demonstrated that the activities to be permitted at the Section 11/12 Mine will be expected to achieve compliance with water quality and other environmental standards. However, if in the future SRI submits information adequately demonstrating that environmental standards will be expected to be met for the Section 11/12 Mine, permit no. MK046RE, a determination may be issued by NMED.

Please contact me at (505) 476-3777 or at david.mayerson@state.nm.us if you have any questions.

xc: Richard Goodyear, Chief, AQB
James Hogan, Chief, SWQB
Jerry Schoeppner, Chief, GWQB
Kurt Vollbrecht, Program Manager, NMED MECS



NEW MEXICO ENVIRONMENT DEPARTMENT

Harold Runnels Building 1190 St. Francis Drive P.O. Box 5469, Santa Fe, New Mexico 87502-5469 Phone (505) 827-2855 Fax (505) 827-2965 www.nmenv.state.nm.us



BUTCH TONGATE Deputy Secretary

JOHN A. SANCHEZ Lieutenant Governor

DATE:

March 19, 2014

TO:

Keith Ehlert.

Acting Mining Act Team Leader Ground Water Quality Bureau

FROM:

Neal Butt

Environmental Scientist / Specialist, Air Quality Bureau

RE: Request for Comments, Regular Existing Mine Application, Section 11/12 Uranium Mine, Southwest Resources, Inc., Permit Application 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 has the following comments:

Air Quality Permitting History

The AQB has no previous record of this operation.

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:

Subsection A of 20.2.72.200 NMAC states that: "Permits must be obtained from the Department by:

(1) "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. . . "; and

RE: Review comments on "NMAC 19.10.5.502 Existing Mine Permit Application" (Section 11/12 Mine Permit Application No. MK046RE; Domenici Law Firm, P.C., January 31, 2014)

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(3) "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, Subsection A of 20.2.73.200 NMAC states that:

(1) "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."

Details

Applicant will mine for uranium in the Ambrosia Lake Mine, which is an existing mine. The mine is located in McKinley County, in the San Juan Basin in the Ambrosia Lake district and the proposed permit area surrounds Ambrosia Lake. Mining operations are currently inactive. The total proposed permit area is approximately 15 acres. Proposed uranium mining operations do not involve dewatering. Ore mining will be conducted upon market order, thus minimizing the quantity and duration of the stockpiling of mined ore and ore will be processed off site. New construction is not necessary. The proposed closeout plan includes a description of how the permit area will be reclaimed to meet the requirements and regulatory performance standards under the Act.

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

Fugitive Dust

Fugitive dust is a common problem at mining sites. The applicant states that "the non-economical material pile is comprised of rock fragments and coarse-grained soils, limiting the amount of dust that can be generated. Seeding during mine reclamation will introduce vegetation, which will further reduce dust generation." The Air Quality Bureau does not regulate fugitive dust; however, we do recommend controls to minimize emissions of particulate matter from fugitive dust sources. The following control strategies can be included in a comprehensive facility dust control plan (from EPA's Compilation of Air Pollutant Emission Factors, AP-42):

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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.

The Air Quality Bureau or the US EPA may implement requirements, regulations and standards for the control of fugitive dust sources in the future. This written determination does not supercede the applicability of any forthcoming state or federal regulations.

If you have any questions, please contact me at (505) 476-4317.

GOVERNOR Susana Martinez



INTERIM DIRECTOR AND SECRETARY TO THE COMMISSION R.J. Kirkpatrick

DEPUTY DIRECTOR Daniel E. Brooks

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

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STATE GAME COMMISSION

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Las Cruces

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March 25, 2014

David Clark, Coal Program Manager **EMNRD** Mining and Minerals Division 1220 South St. Francis Drive Santa Fe NM 87505

APR 03 2014

MINING & MINERALS DIVISION

RE: Section 11/12 Mine, Regular Existing Mine Permit Application MK046RE; NMDGF Project No. 16203

Dear Mr. Clark:

In response to your letter dated February 21, 2014, the New Mexico Department of Game and Fish (Department) has reviewed the document reference above. Southwest Resources, Inc. proposes to resume mining the existing Section 11/12 underground uranium mine, located in the Ambrosia Lake mining district, McKinley County, NM, Department staff conducted a site inspection on March 13, 2014 with representatives of EMNRD Mining and Minerals Division (MMD), NM Environment Department, Office of the State Engineer, and the operator. The mine is on a private ranch with private mineral rights. Habitat type on the proposed area is severely overgrazed grama grass with scattered low shrubs and flat topography.

Section 11/12 meets the NM Mining Act definition of an existing mine, and should have been permitted by December 31, 1994. If permitted now, the closeout schedule should include immediate reclamation of areas not actively used. Currently the applicant is proposing no reclamation until the end of mine life. The site assessment submitted with the application is inadequate regarding Section 69-36-5 of the Mining Act Item B(2), description of water quality impacts, Item B(4), piles and other material accumulations, and Item B(6), wildlife and habitat. Vegetation surveys conducted in 1987 should be repeated to document current conditions and include quantitative information. The Closeout Plan as submitted does not meet requirements of Mining Act Rules 19.10.5.506 J(3) and 507 A, to "reclaim disturbed areas within the permit area to a condition that allows for the re-establishment of a selfsustaining ecosystem".

The permit area includes Ambrosia Lake, an internally draining (endorheic) depression, which contained open water in two disjunct pools during the site inspection, despite prolonged drought conditions. Ephemeral natural catchments are geographically isolated wetlands identified as a key habitat type in the Comprehensive Wildlife Conservation Plan for New Mexico (NMDGF 2006). There are 42 Species of Greatest Conservation Need associated with ephemeral natural catchments. Ambrosia Lake is currently in very poor habitat condition, having been impacted by chemical contamination, livestock trampling and various berms and ditches. Nevertheless quite a bit of wildlife activity was observed during the site visit despite the barren surroundings. Two unidentified ducks, some killdeer and several sparrows were foraging or resting on and around the water. The Section 12 headframe next to the lake supports the

David Clark March 20 2014 Page -2-

nest of an insect-eating bird, most likely an American kestrel. A waste or ore pile near the headframe contains a mammal burrow, most likely made by a skunk. The Closeout Plan should include restoration of Ambrosia Lake to a more functional habitat condition.

The radiation survey submitted as part of the Closeout Plan is not sufficient either to establish background level or to characterize the condition of the permit area. The MMD Guidance which was followed is intended for minimal impact exploration activities, prior to disturbance. The operator should submit for agency approval a plan to establish site-specific clean-up levels which follows the draft MMD guidelines for existing mines. The entire site should be surveyed in a grid pattern, including sediment within Ambrosia Lake, to account for material dispersed by wind and water over the years. Ambrosia Lake should also be assessed for chemical contamination from open drums and mining equipment in the water. The gamma radiation survey conducted by Intera in February 2013 found levels ranging from 10 to 380 uR/hr, in proximity to various mine features. The US Environmental Protection Agency report "Aerial Radiological Surveys, Ambrosia Lake Uranium Mines, Ambrosia New Mexico" (August 2011), found that the terrestrial background exposure rate in areas not associated with elevated readings ranged between 5 to 10 uR/hr.

Thank you for the opportunity to comment on this permit action. If there are any questions please contact Rachel Jankowitz, Mining Habitat Specialist at 505-476-8159 or rjankowitz@state.nm.us.

Sincerely

Matthew Wunder, Ph.D.

Chief, Ecological and Environmental Planning Division

cc: USFWS NMES Field Office

Kurt Vollbrecht, NMED Groundwater Quality Bureau

Chuck Schultz, NW Regional Habitat Biologist, Department

Clark, David, EMNRD

From:

Roth, Daniela, EMNRD

Sent:

Friday, March 07, 2014 11:47 AM

To:

Clark, David, EMNRD

Subject:

RE: Request for comments, regular existing mine application, Section 11/12 Mine

(Permit No. MK046RE)

Dear David Clark:

Thank you for giving me the opportunity to review and comment on the regular existing mine application for the Section 11/12 uranium mine at Ambrosia Lake, in McKinley County, NM (Permit No. MK046RE). Although there are several state listed plants known to occur in McKinley County, it is unlikely any endangered plants occur in the project area due to the lack of suitable habitat for these species. Therefore it is unlikely any state endangered plants would be impacted by this mine.

Please let me know if I can be of further help,

Daniela Roth

BOTANY PROGRAM COORDINATOR

EMNRD-Forestry Division 1220 S. St. Francis Dr. Santa Fe, NM 87505 (505)476-3347 (Phone) (505)476-3330 (Fax)

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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



April 22, 2014

David L. Clark Coal Program Manager Mining and Minerals Division 1220 South Saint Francis Drive Santa Fe, NM 87505

Re: Request for Comments, Regular Existing Mine Permit Application, Southwest Resources, Inc., Section 11/12 Mine, Permit Application No. MK046RE

Dear Mr. Clark:

I am writing in response to your request for review and comment on the above referenced permit application and closeout plan received at the State Historic Preservation Office (SHPO) on February 25, 2014.

According to our records, there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties within the permit area. The nearest registered property is the Mt. Taylor Traditional Cultural Property (SR 1939), which lies about 4 miles east of Ambrosia Lake Mine. There are also no known archaeological sites within the mine permit boundaries; however an archeological survey has not been conducted.

Although Mt. Taylor is approximately 4 miles away, reactivation of the mine has the potential to indirectly alter the setting of the TCP by introducing noise, lights and atmospheric elements that may adversely impact the TCP and the use of the TCP by Native American tribes. For these reasons, the SHPO encourages MMD to continue Native American consultation on this project and to identify any concerns Native American tribes may have. MMD should also consider whether the issuance of the permit will be a "use" (or adverse effect) of the Mt. Taylor TCP under the Prehistoric and Historic Sites Preservation Act (PHSPA). A use can occur later in time and include the introduction of physical, audible, visual or atmospheric elements that substantially impair the historic character or significance of the site or substantially diminish the aesthetic value. Keeping this in mind, any new construction or future expansion of the mine could lead to additional adverse effects to the TCP.

Although there are no known archaeological sites within the mine permit boundaries, several archaeological sites have been documented nearby. These sites were identified during archaeological surveys for pipelines, transmission lines and the rail line. Because archaeological sites have been identified nearby, there is a potential for unidentified archaeological sites within the permit boundaries. Based on our experience, existing mines often have areas within the permit boundaries that have not been disturbed to the extent that archaeological sites have been completely removed.

Although a survey is not required pursuant to 19.10.5.505 NMAC, this office recommends an archaeological survey be conducted prior to any additional land disturbance or before commencement of closeout activities. Identification of archaeological sites prior to initiating ground disturbing activities will help avoid inadvertent damage to cultural resources that may be eligible for listing on the State Register of Cultural Properties or the National Register of Historic Places

If you have any questions concerning these comments, please do not hesitate to contact me. I can be reached by telephone at (505) 827-4064 or by email at michelle.ensey@state.nm.us.

Sincerely,

Michelle M. Ensey Archaeologist

Log: 98785

Clark, David, EMNRD

From:

cuddy, alan, OSE

Sent:

Monday, March 17, 2014 7:42 AM

To:

Clark, David, EMNRD

Cc:

Johnson, Mike S., OSE

Subject:

Southwest Resources Section 11/12 Mine, Permit MK046RE

Dave,

On February 25, 2014, the Hydrology Bureau of the Office of the State Engineer (OSE) received a Request for Comments, Regular Existing Mine Permit Application, Southwest Resources, Inc., Section 11/12 Mine, Permit Application No. MK046RE submitted by Southwest Resources, Inc. The project, located in McKinley County near Ambrosia Lake, proposes to mine uranium ore from an existing underground mine.

No description of the proposed mining operations, such as whether the existing mine workings would be deepened, were provided in the permit application. If the operations were to go deeper, there is a chance that groundwater would be encountered. A description of the proposed mining should be provided in the permit application.

No documentation of groundwater conditions was provided in the permit application. The mine workings were apparently dry during the original mining and, reportedly, are dry at the present time. Water level measurements from any nearby wells, mine shafts or ventilation shafts should be provided in the permit application to assess if the proposed mining operations will encounter groundwater and therefore require mine dewatering.

No description of water use or water supply was provided in the permit application. If water is required, for example for drilling or sanitary uses, and the amount is less than three acre-feet, Southwest Resources will need to obtain a temporary permit by filing form WR-01. If more than three acre-feet of water are required, a water right must be obtained. The proposed source of water and the required amount should be provided in the permit application. Southwest Resources should contact the OSE District 1 office at 5550 San Antonio Drive NE, Albuquerque, NM 87109-4127 for assistance with water rights. Their phone number is (505) 383-4000.

Please contact me if you have any further questions.

Alan S. Cuddy Hydrology Bureau Office of the State Engineer P.O. Box 25102 Santa Fe, NM 87504-5102 Phone: (505) 476-7400 Fax: (505) 476-0220

alan.cuddy@state.nm.us

Clark, David, EMNRD

From:

Foreback, Terence < TForeback@admin.nmt.edu>

Sent:

Monday, February 17, 2014 9:36 AM

To:

pdomenici@dominicilaw.com; glotspeich@aol.com

Subject:

Southwest Resources Contact Info

Southwest Resources, Inc. 4011 Mesa Verde NE Albuquerque, NM 87110 (505) 266-2500

Mr. George Lotspeich Mr. Pete Domenici, Jr.

RE: Ambrosia Lake Mine

Dear Sirs:

I am in receipt of the Legal Notice of Southwest Resources, Inc.'s permitting activities for its Ambrosia Lake Mine. While it is my understanding that there are no immediate plans to place the mine into operation, I would like to be sure that you are aware of New Mexico mining safety requirements for underground mines. These requirements can be linked from our web page:

http://www.bmi.state.nm.us/navSafety.htm

I am please to answer any questions you might have on these requirements in the event that underground mining activities move forward.

Safe driving starts with good visibility. Windows should be scraped of ice, snow, frost & clean!



Terence Foreback NM State Mine Inspector

801 Leray Place Socorro, NM 87801 třareback@admin.nmt.edy Office: (575) 835-5460 Fax: (575) 835-5430 Cell: (505) 553-1532

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