

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Michelle Lujan Grisham**  
Governor

**Sarah Cottrell Propst**  
Cabinet Secretary

**Todd E. Leahy, JD, PhD**  
Deputy Cabinet Secretary

**Jerry Schoeppner, PG, Director**  
Mining and Minerals Division



November 4, 2022

Carol Ness  
American Magnesium  
P.O. Box 1013  
Elephant Butte, NM 87935

**RE: Agency Review Comments and Request for Additional Information, Little Mountain Project, Luna County, New Mexico, Permit Tracking No. LU047EM**

Dear Ms. Ness,

The New Mexico Mining and Minerals Division (“MMD”) has reviewed the Permit Application Package (“PAP”) submitted by American Magnesium (“AmMg”) for the Little Mountain exploration project located in Luna County, New Mexico. In accordance with 19.10.3.302.G NMAC, MMD requested comments on the PAP from cooperating state and federal agencies.

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 Department of Game and Fish (“NMDG&F”), the New Mexico Office of the State Engineer (“NMOSE”), the New Mexico Department of Cultural Affairs - Historic Preservation Division (“NMDCA/HPD”), and the Bureau of Land Management (“BLM”). Additionally, please find general comments from MMD based on review of this application.

**General Comments:**

MMD has reviewed the PAP and has found it to be *technically incomplete* pending receipt of acceptable supplemental information identified in this letter. MMD has conducted a review of the PAP and has the following comments to be addressed in writing:

1. During the site inspection on October 13, 2022, several locations along access road B016 were observed to be rough and would likely have to be improved or graded in order for a drill rig to access the project. This potential disturbance is not accounted for in the application. Please address whether improvements to road B016 are anticipated for this project.
2. AmMg did not identify in Section 2.0 of the application that a portion of the project area proposed for utilization (T25S, R8W, Section 26) is private surface. Demonstration of right-to-enter this private property is required. Please address.

3. Section 4.E states that a 9,000 lb water truck will be utilized for this project. Please describe how this water truck will be utilized during drilling; i.e. will this truck deliver water to storage tanks located in the staging area or top of Little Mountain.
4. Please identify the anticipated water source for this project.
5. The approximate 200 feet of improvement to the existing road B013 described in Section 4.F appears to be a low estimate based on the site inspection performed. From the intersection of road B016 and B013, road B013 toward the staging area was barely visible in places and other places had erosion or arroyo crossings that will likely be required to be improved. In addition to the demonstration of right-to-enter this private property and improve road B013, MMD will require that disturbance to road B013 be included in a financial assurance cost estimate.
6. Section 4.F Description of Overland Travel Routes states “the overland travel path will be created by the bulldozer which will assist the drill rig to each drilling location on the ridgeline of Little Mountain.” The use of a bulldozer to pull or drag a drill rig up a very steep and rugged slope to the ridgeline does not qualify as overland travel. A financial assurance cost estimate is required to be submitted to account for reclamation of the steep cuts that will be created up the side of Little Mountain, along the crest, and down the side of the Little Mountain as portrayed in Figure 2 of the PAP.

#### **Bureau of Land Management Comments**

Please review the comment letter received from the BLM and respond to any concerns.

#### **NMED Mining Environmental Compliance Section, Ground Water Quality Bureau Comments (“MECS”)**

Please review the comment letter received from NMED MECS Ground Water Quality and respond to any concerns.

#### **NMED Surface Water Quality Bureau Comments:**

Please review the comment letter received from NMED Surface Water Quality Bureau and respond to any concerns.

#### **NMED Air Quality Bureau Comments:**

Please review the comment letter received from NMED Air Quality Bureau and respond to any concerns.

#### **NMDG&F Comments:**

Please review the comment letter received from NMDG&F and respond to any concerns.

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**NMOSE Comments:**

Please review the comment letter received from NMOSE and respond to any concerns.

**NMDCA/HPD Comments:**

Please review the comment letter received from NMDCA/HPD and respond to any concerns.

If you have any questions, please contact me at (505) 372-8634, or via email at [david.ennis@emnrd.nm.gov](mailto:david.ennis@emnrd.nm.gov).

Sincerely,



David ("DJ") Ennis, Permit Lead  
Mining Act Reclamation Program ("MARF")

Enclosures:      Agency Letters

Cc with enclosures:      Terry Jensen, G3 Gauvreau GeoEnvironmental Group

Cc w/o enclosures:      Holland Shepherd, Program Manager, MARF/MMD  
File (GR087EM)



# United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
Las Cruces District Office  
1800 Marquess Street  
Las Cruces, New Mexico 88005  
<https://www.blm.gov/new-mexico>

In Reply Refer To:  
3809 (L0310)  
NMNM 136678

OCT 14 2022

American Magnesium  
Carol Ness  
P.O. Box 1013  
Elephant Butte, NM 87935

Dear Ms. Ness:

On September 19, 2022, the Bureau of Land Management (BLM) received your plan of operations modification to conduct drilling activities near Deming, Luna County, New Mexico. Please refer to NMNM 136678 in future correspondence concerning this operation.

Consistent with the surface management regulations at 43 CFR 3809.411(a), the BLM has reviewed the plan of operations modification for completeness relative to 43 CFR 3809.401(b). Based on our review, the following information is required for the plan of operations to be complete:

1. Per 43 CFR 3809.401(b)(2)(viii) a plan for all access routes must be included in your plan. Please update your plan modification to include any road maintenance or improvement that will need to take place for both the BLM unnamed road and the private surface access.
2. Per 43 CFR 3809.401(b)(2)(vii) a general schedule of operations from start to closure must be included in your plan. Please update the plan modification to include information on how long drilling activities will take place.
3. The BLM cannot authorize activities on private surface. Permission from the landowner will need to be obtained to use the private surface.
4. The road labeled as county road B013 on Figure 2 is not a county road. Please remove this reference.
5. The BLM needs confirmation in writing that this plan modification supersedes the drilling plan that is outlined in the approved plan of operations.

6. Per conversation on October 13, 2022, during a field visit the drilling plan must be revised to reflect on the ground conditions and proposal from the driller.
7. Per 43 CFR 3809.401(c)(1) you must supply a cultural resources inventory for all areas of disturbance, including the private surface that were not inventoried for the approved plan of operations.
8. Per 43 CFR 3809.401(d) you must submit an estimate of the cost to fully reclaim your operations.

Please provide a response to the above information requests at your earliest convenience. You may provide replacement pages or a narrative response. Upon receipt of the required information, the BLM will determine whether or not the Plan of Operations is complete.

Once the Plan is determined complete, the BLM will solicit public comment on the Plan under 43 CFR 3809.411(c), either separate from or as a part of the environmental review process required by the National Environmental Policy Act. Soliciting public comment must occur before making decision on the Plan of Operations according to 43 CFR 3809.411(d).

If you have any questions, please contact Leighandra Keeven, Geologist, at (575) 525-4337.

Sincerely,



David Wallace  
Assistant District Manager  
Multi-Resources  
Las Cruces District Office

for:

cc:

David Ennis P.G.  
New Mexico Mining and Minerals Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87050



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

October 14, 2022

David ("D.J.") Ennis, P.G.  
Mining and Minerals Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505  
david.ennis@emnrd.nm.gov

Re: HPD Log# 118087, Request for HPD Comments - Little Mountain Exploration

Dear Mr. Ennis:

I am writing in response to your request for comment on the above referenced permit application received at this office September 29, 2022

Pursuant to 19.10.4.03 NMAC, Non-Coal Mining Explorations: cemeteries and burial grounds and the disturbance of cultural resources listed on or eligible for the National Register of Historic Places or the State Register of Cultural Properties shall be avoided until clearance has been granted by the Director after consultation with the State Historic Preservation Officer.

According to our files, there are no cultural resources listed on either the National Register of Historic Places (NRHP) or the State Register of Cultural Properties in the permit area. There are also no known cemeteries or other burial grounds. A large part of the project area has been surveyed for cultural resources and it contains three archaeological sites. Site LA 181084 is situated relatively close to the bore hole locations, but this site has been deemed not eligible for the NRHP and exploration related drilling will have no effect on this property. Site LA 181083 is situated further away from the proposed bore hole locations, and it has also been deemed not eligible for the NRHP. Site LA 18836 is situated further east of the bore holes, in an area that the exploration permit application indicates there will be no project related ground disturbance. As such, this project will have no effect on LA 18836. This sites eligibility for the NRHP has not been evaluated, so if future boring will occur on the eastern portion of the general vicinity of the current bore hole locations, the applicant should re-submit the project to the State Historic Preservation Officer for review.

Based on this information, this permit renewal will have no adverse impacts to cultural resources listed on the National or State Registers.

If you have any questions or concerns, please contact me at [richard.reycraft@dca.nm.gov](mailto:richard.reycraft@dca.nm.gov) or telephone me at 505-452-6115.

Sincerely,

*Richard Reycraft*

Richard Reycraft, Ph.D.  
HPD Archaeological review.

If you have any concerns or questions, please contact me by phone at (505)-452-6115 or e-mail me at [richard.reycraft@state.nm.us](mailto:richard.reycraft@state.nm.us).

Sincerely

*Richard Reycraft*

Richard Reycraft

HPD Staff Archaeologist

## Ennis, David, EMNRD

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**From:** Angel, Christopher, OSE  
**Sent:** Friday, October 14, 2022 2:05 PM  
**To:** Ennis, David, EMNRD  
**Cc:** Zemlick, Katie, OSE  
**Subject:** NMOSE Comments for American Magnesium Little Mountain Minimal Impact Exploration Permit (LU047EM)  
**Attachments:** nmos\_generalconcerns.pdf

The New Mexico Office of the State Engineer (NMOSE) Hydrology Bureau received the Mining and Minerals Division's (MMD's) September 29, 2022, request for comments on the subject American Magnesium Little Mountain - New Minimal Impact Exploration Permit Application. The application materials were downloaded from <https://www.emnrd.nm.gov/mmd/lu047em-american-magnesium-little-mountain-exploration/>.

The application states that a total of 12, 2-inch diameter boreholes will be drilled from 4 drill pads that are 60 feet in length and 40 feet in width. The total depth of each well is to be approximately 200 vertical feet. Based on the nearest well with a well record (M-02291), groundwater is not likely to be encountered as the depth to groundwater is approximately 264 feet below ground level.

The drilling fluid system is to be a closed loop tank system. This system maintains the drilling fluids in tanks and not in open pits. In accordance with NMAC 19.27.4.29.P.(2), *"Drilling fluids and cuttings shall be contained on the drilling site or on property under the control of the well owner, and not be allowed to migrate or be discharged off that property except for authorized disposal. Drilling fluids and cuttings shall not be discharged into any waters of the state."*

Based on the LU047EM application a 9,000 pound water truck is to be used in the construction of the wellbores. Water used to fill the water truck needs to be from an appropriately permitted source.

If groundwater is encountered in any of the 12 boreholes, then the NMOSE District III Office (321 West Spruce Street, Deming, NM 88030; 575-546-2851) needs be contacted to discuss obtaining Exploratory Permits and Well Plugging Plan of Operations.

Christopher E. Angel, PG  
Senior Hydrologist  
New Mexico Office of the State Engineer  
Hydrology Bureau  
505-383-4018



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

Well drilling activities, including exploratory borehole drilling (drilling of “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) promulgated 6/30/2017, which requires 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.

Additionally, all onsite well drilling activities, including but not limited to exploratory borehole drilling encountering groundwater and plugging of such water-bearing boreholes 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.

Plugging of exploratory boreholes that encounter groundwater will occur under joint jurisdiction of the NMOSE and MMD (Mining and Minerals Division). Filing and acceptance of the NMOSE Well Plugging Plan of Operations ([http://www.ose.state.nm.us/STST/Forms/WD-08%20Well%20Plugging%20Plan%20of%20Operations\\_2016-01-20\\_final.pdf](http://www.ose.state.nm.us/STST/Forms/WD-08%20Well%20Plugging%20Plan%20of%20Operations_2016-01-20_final.pdf)) in conjunction with filing NMOSE Applications for Permit to Drill a Well with no Consumptive Use of Water ([http://www.ose.state.nm.us/WR/Forms/WR-07%20Application%20for%20Permit%20to%20Drill%20a%20Well%20with%20No%20Consumptive%20Use\\_2012-06-14\\_final.pdf](http://www.ose.state.nm.us/WR/Forms/WR-07%20Application%20for%20Permit%20to%20Drill%20a%20Well%20with%20No%20Consumptive%20Use_2012-06-14_final.pdf)) are required where it is expected water-bearing stratum/strata may be penetrated by project boreholes.

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.**

Any exploration drilling where a water-bearing stratum is encountered will be subject to pertinent sections of those rules and regulations contained in 19.27.4 NMAC (6/30/2017), including but not limited to Sections 19.27.4.30.C NMAC for plugging and abandonment of non artesian wells; 19.27.4.31 NMAC for artesian wells; 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://164.64.110.239/nmac/parts/title19/19.027.0004.htm>

#### **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 inserted into a borehole of sufficiently large diameter to allow easy extraction upon termination of all drilling. To help prevent deleterious fall-in or drainage of cuttings/sediments into the annulus outside the temporary casing, the top of the annulus should be made appropriately fluid-tight.

If the temporary casing becomes stuck in-place, difficulties in the proper plugging of the borehole and resultant potential for commingling of aquifers or surface water drainage may occur via an

unsealed annulus. 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 if the borehole encounters a water-bearing stratum. Should casing be left in a water-bearing boring, 19.27.4 NMAC provisions apply, including those requiring an appropriate type and extent of annular seal surrounding the well casing.

#### **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 upper ten to twelve feet 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. The MMD may enforce a plugging time frame that would 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. The rig often remains 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.



## MEMORANDUM

DATE: October 17, 2022

TO: Anne Maurer, Mining Act Team Leader, Mining Environmental Compliance Section, NMED

FROM: Sufi Mustafa, Staff Manager, Air Dispersion Modeling and Emission Inventory Section, Air Quality Bureau.

**Request for Review and Comment, New Minimal Impact Exploration  
Permit Application, American Magnesium Little Mountain, Luna County, New Mexico, Mining  
Act Permit No. LU047EM**

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.

### Details

American Magnesium, LLC has requested a minimum impact exploration permit on BLM land near Deming, NM. The project will include air drilling 12 holes, creating drill pads, creating new roads, and improving some. Total land disturbance is estimated to be 0.87 acres.

### 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.

20.2.15 NMAC, *Pumice, Mica and Perlite Processing*. Including 20.2.15.110 NMAC, *Other*

*Particulate Control*: "The owner or operator of pumice, mica or perlite process equipment shall not permit, cause, suffer or allow any material to be handled, transported, stored or disposed of or a building or road to be used, constructed, altered or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne."

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

**Re: Request for Review and Comment, New Minimal Impact Exploration Permit Application, American Magnesium Little Mountain, Luna County, New Mexico, Mining Act Permit No. LU047EM**

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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.

**Re: Request for Review and Comment, New Minimal Impact Exploration Permit Application, American Magnesium Little Mountain, Luna County, New Mexico, Mining Act Permit No. LU047EM**

Page 3

**Recommendation**

The Air Quality Bureau has no objection to this request.

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

If you have any questions, please contact me at 505 629 6186



## MEMORANDUM

October 14, 2022

To: Anne Maurer, Mining Act Team Leader  
Mining Environmental Compliance Section  
Groundwater Quality Bureau (GWQB)

From: John Moeny  
Watershed Protection Section  
Surface Water Quality Bureau

Subject: **Request for Review and Comment, New Minimal Impact Exploration Permit Application, American Magnesium Little Mountain, Luna County, New Mexico, Mining Act Permit No. LU047EM**

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On October 3, 2022, NMED received a request for comments regarding a new exploration permit application submitted by American Magnesium ("Applicant"). The mine is in Luna County, approximately 13 miles southeast of Deming on Bureau of Land Management lands with an access road cutting through private land.

### Summary of Proposed Action

The Applicant would like to bore twelve 2-inch diameter holes to a maximum depth of 200 feet from 4 drill pad locations atop Little Mountain. Each drill pad will require a 60'x40' pad, in addition to a 60'x40' staging area and drilling will be utilize a closed loop fluid/mud system. Existing roads will be utilized where feasible, but new access roads will be needed to access the site. Total disturbance is estimated at 0.87 acres. Access roads will intersect at least two ephemeral drainages.

### Relevant State and Federal Water Quality Regulations

Mine activities may affect Surface Waters of the State as defined in 20.6.4.7 NMAC, which includes ephemeral arroyos within the mining operations and are subject to 20.6.4.98 NMAC. Furthermore, operations must ensure protection of surface waters of the state including General Criteria at 20.6.4.13 NMAC, established to sustain and protect existing or attainable uses of surface waters of the State. These general criteria apply to all surface waters of the state at all times. Surface waters of the State shall be free of any water contaminant in such quantity and of such duration as may with reasonable probability injure human health, animal or plant life or property, or unreasonably interfere with the public welfare or the use of property.

The Applicant is required to 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).

In addition to the above regulatory standards, SWQB requires the following practices to avoid contamination and to protect surface and groundwater quality:

- Process water must be contained within the closed-loop system and may not be discharged unless a discharge permit has been secured from the EPA and/or NMED.
- Fuel, oil, hydraulic fluid, lubricants, and other petrochemicals must have a secondary containment system to prevent spills. Store these materials outside of the flood-prone zone.
- Perform all work, when practicable, in the dry season and postpone work during wet and muddy conditions.
- 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.
- Provide a minimum 50' setback from existing drainages to the proposed staging/laydown area.

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



## Electronic Transmission

### MEMORANDUM

Date: October 19, 2022

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

Through: Anne Maurer, Mining Act Team Leader, Mining Environmental Compliance Section (MECS)

From: John Moeny, Surface Water Quality Bureau (SWQB)  
Sufi Mustafa, Air Quality Bureau (AQB)

Subject: **New Mexico Environment Department (NMED) Comments, Little Mountain, ,  
American Magnesium, LLC, Luna County, New Mexico, New Mexico Mining Act  
Permit No. LU047EM**

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The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on September 29, 2022 requesting that NMED review and provide comments on the above-referenced MMD permitting action. Pursuant to the Mining Act, the Little Mountain Mine is a new minimal impact exploration project. MMD requested comments on the application within 20 days of receipt of the request for comments. NMED has the following comments.

#### **Background**

American Magnesium, LLC (applicant) submitted the new minimal impact exploration application that includes a proposal to drill a total of 12 boreholes, 200 feet in depth on four drill pads. The total acreage of disturbance is 0.87 acres. Depth to groundwater is reported in the application to be approximately 250 feet below ground surface and is not anticipated to be encountered during exploration.

#### **Air Quality Bureau**

The AQB comments are attached.



Mr. Holland Shepherd  
Little Mountain, LU047EM  
September 23, 2022

**Surface Water Quality Bureau**

The SWQB comments are attached.

**Mining Environmental Compliance Section**

Based on a review of the Office of the State Engineer well data, groundwater is located at a depth approximately 250 feet below ground surface. Given the depth to groundwater, the MECS does not have any comments.

**NMED Summary Comment**

NMED has determined that the activities proposed in the application will be protective of the environment if done in accordance with the application and comments referenced above.

If you have any questions, please contact Anne Maurer at (505) 660-8878.

cc: David Ennis, Permit Lead, EMNRD-MMD  
Joseph Fox, Acting Program Manager, NMED-MECS  
Shelly Lemon, Bureau Chief, NMED-SWQB  
Elizabeth Bisbey-Kuehn, Bureau Chief, NMED-AQB



DIRECTOR AND SECRETARY  
TO THE COMMISSION  
Michael B. Sloane

STATE OF NEW MEXICO  
DEPARTMENT OF GAME & FISH

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STATE GAME COMMISSION

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3 November 2022

David (DJ) Ennis, P.G., Permit Lead  
Mining Act Reclamation Program  
Mining and Minerals Division (MMD)  
1220 South St. Francis Drive  
Santa Fe, NM 87505

***RE: Minimal Impact Exploration Permit, American Magnesium, Little Mountain Project,  
Luna County, New Mexico, Permit No. LU047EM; NMDGF No. NMERT-2148.***

Dear Mr. Ennis,

The New Mexico Department of Game and Fish (Department) has reviewed the proposed exploration project referenced above. American Magnesium, LLC (American Magnesium) is proposing to drill a total of 12 exploratory boreholes, to a depth of approximately 200 feet, across four drill pad locations. The project is located in Sections 27 and 34, T25S, R8W and will disturb a total area of approximately 0.87 acres. The Department provides the following recommendations to minimize potential impacts of the proposed exploration project on wildlife.

Department staff were unable to attend the MMD site inspection on 13 October 2022 but had previously visited the proposed mine site on 15 August 2017. During the 2017 site visit, Department staff noted that the list of wildlife species presented in Table 5 of American Magnesium's Plan of Operations significantly under-represented the diversity of fauna that may occur within the mine permit area. Additional wildlife species observed during the Department's 2017 site visit included: loggerhead shrike (*Lanius ludovicianus*), pyrrhuloxia (*Cardinalis sinuatus*), red-tailed hawk (*Buteo jamaicensis*), rufous hummingbird (*Selasphorus rufus*), striped whipsnake (*Masticophis taeniatus*), Swainson's hawk (*Buteo swainsoni*), and turkey vulture (*Cathartes aura*).

To minimize the likelihood of adverse impacts to migratory bird nests, eggs, or nestlings, the Department recommends that ground disturbance, vegetation removal, and drilling activities be conducted outside of the primary breeding season for migratory songbirds and raptors (1 March – 1 September). If ground disturbing and drilling activities must be conducted during the breeding season, the area should be surveyed for active nest sites (with birds or eggs present in the nesting territory) and avoid disturbing active nests until young have fledged. For active nests, establish adequate buffer zones to minimize disturbance to nesting birds. Buffer distances should be ≥100 feet from songbird and raven nests; 0.25 miles from most raptor nests; and 0.5 miles for ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetos canadensis*), peregrine falcon (*Falco peregrinus*), and prairie falcon (*Falco mexicanus*) nests. Active nest sites in trees or shrubs that must be removed should be mitigated by qualified

biologists or wildlife rehabilitators. Department biologists are available to consult on nest site mitigation and can facilitate contact with qualified personnel.

There are historic mine shafts located within the mine permit area that could be providing important bat habitat. The Department recommends that shafts within 100 yards of the drill pad sites where exploratory boreholes are proposed be surveyed for bat occupancy. If any shafts are occupied, establish appropriate buffer distances to minimize potential disturbance to roosting or hibernating bats.

Thank you for the opportunity to provide comments on the proposed exploration project. If you have any questions, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 270-6612 or [ronald.kellermueller@dof.nm.gov](mailto:ronald.kellermueller@dof.nm.gov).

Sincerely,

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

cc: USFWS NMES Field Office