

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Michele Lujan Grisham**  
Governor

**Sarah Cottrell Propst**  
Cabinet Secretary

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

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



**Electronic Transmission**

April 2, 2020

Allen Norris  
Dicaperl Minerals Corp., Socorro Mine & Mill  
P.O. Box 1436  
Socorro, New Mexico, 87801

**RE: Agency Review Comments and Request for Additional Information, Socorro Mine and Mill  
Revision 19-1 Application, Permit No. SO001RE – Socorro County, New Mexico**

Dear Mr. Norris,

The New Mexico Mining and Minerals Division (“MMD”) received the submittal from CDM Smith on behalf of Dicaperl Mineral Corp. titled, “*Site Wide Closeout Plan Updated Application, Response to Closure Cost Comments, Revision Application 16-1 [sic; should be 19-1], Permit No. SO001RE, Socorro Mine and Mill*”, dated October 31, 2019.

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”).

**General Comments:**

MMD has reviewed the PAP and deemed it administratively complete, pursuant to §19.10.5 NMAC, in a letter to Dicaperl dated January 13, 2020. 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 has conducted a review of this document and has the following comments to be addressed in writing:

1. In the application it states “we are requesting that the permit boundary align with the property boundary” but figure C-1 only has the permit boundary aligning with part of the property boundary. Please clarify whether Dicaperl wants the new permit boundary to be what is depicted in figure C-1 or to completely align with the property boundary. If Dicaperl is requesting a change to the permit boundary to be coincident with the property boundary, please revise and provide a new figure to MMD showing such.
2. MMD will not be releasing any FA for Dump E at this time due to several erosion features which MMD and the other agencies agree need corrective action. A corrective action plan to fix the erosion will be required in the future.

**Agency Review Comments and Request for Additional Information, Socorro Mine and Mill Revision  
19-1 Application, Permit No. SO001RE – Socorro County, New Mexico**

**April 2, 2020**

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The following comments were provided by MMD to Dicaperl in a letter dated January 16, 2020 in response to the document submitted by Dicaperl on December 30, 2019 titled “*Technical Memorandum: Work Plan for Slope Stability Assessment – Site Wide Closeout Plan Updated Application.*” These comments from MMD have not yet been addressed by Dicaperl and are therefore reiterated here:

3. In the *Other Data Collection Efforts* section, the work plan discusses the use of exploratory borings for the slope stability analysis. Please provide a map of the boring locations to MMD prior to drilling.
4. The *Site Visits* section states “we suggest that mine management offers MMD the opportunity to be present during the site visits.” MMD would like to be present during these future site visits and requests advance notice prior to these assessments.
5. MMD would like to be present during the original assessment outlined in this work plan. Please notify MMD a couple of weeks prior to the assessment.
6. Please provide a timeline for completion of the exploratory/geotechnical drilling program and anticipated date the slope stability assessment will be submitted to MMD for review. The results of the slope stability assessment are required prior to MMD’s ability to process Permit Revision 19-1.

**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.

**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](mailto:jennifere.johnson@state.nm.us).

**Agency Review Comments and Request for Additional Information, Socorro Mine and Mill Revision  
19-1 Application, Permit No. SO001RE – Socorro County, New Mexico**

**April 2, 2020**

**Page 3 of 3**

Sincerely,

A handwritten signature in blue ink that reads "Jennifer Johnson". The signature is written in a cursive, flowing style.

Jenn Johnson, Permit Lead  
Mining Act Reclamation Program ("MARF")

**Enclosures:**

March 17, 2020 Letter to MMD from NMDGF  
March 25, 2020, Letter to MMD from NMED  
January 23, 2020 Letter to MMD from NMDCA/HPD

**cc:** Rocky Torgrimson, Operations Manager, Dicalite Minerals Corporation  
Jon Nickel, Senior Project Manager, CDM Smith  
Holland Shepherd, Program Manager, MARP  
Mine File (SO001RE)



**Michelle Lujan Grisham**  
Governor

**Howie C. Morales**  
Lieutenant Governor

**NEW MEXICO  
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**Ground Water Quality Bureau**

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**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

**MEMORANDUM**

Date: March 25, 2020

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

Through: Anne Maurer, Mining Environmental Compliance Section

From: George Llewellyn, Mining Environmental Compliance Section  
John Moeny, Surface Water Quality Bureau  
Rhett Zyla, Air Quality Bureau

Subject: **NMED Comments, Socorro Mine and Mill, Revision 19-1, Dicaperl Minerals Corporation, New Mexico Mining Act Permit No. SO001RE**

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The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on January 21, 2020 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 60-day comment period prescribed in the regulation. NMED has the following comments.

**Background**

Dicaperl Minerals Corp (Dicaperl) is requesting a revision to the Socorro Mine and Mill permit. The application for revision requests a change to the permit boundary, pit expansion, and partial financial assurance (FA) release for completed earthwork on Waste Rock Dumps B through F.

**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 performed a site inspection of the Socorro Mine and Mill on February 5<sup>th</sup>, 2020 with staff from MMD, New Mexico Department of Fish and Game, and NMED-Surface Water Quality Bureau. Based on the site inspection and review of the application, MECS has the following comments:

1. Inspection of Waste Rock Dumps B, C, D, E and F – Minimal erosion was observed on Waste Rock Dumps B, C, D, and F. However, Waste Rock Dump E has significant erosional features forming including rills and gullies throughout the cover system. Both the top surface and side slopes are eroding. Dicaperl installed straw wattles on the 2:1 slopes and rip-rap in the gullies to mitigate the erosion. MECS recommends that erosion control maintenance be performed on Waste Rock Dump E and that stability be demonstrated prior to FA release for this mine unit.
2. Request to Change Permit Boundary – MECS has no comment on this proposed change.
3. Request to Expand the Pit – MECS has no comment on the pit expansion proposal but requests the opportunity to review and comment on the slope stability analysis work plan when it is submitted.

### **NMED Summary Comment**

NMED finds that the proposed changes to the permit are likely to have a minimal impact to the environment if operated and maintained with the approved permits, pollution controls, and the comments above with the exception of the concerns stated regarding Waste Rock Dump E. Dicaperl should be required to perform cover system repairs and erosion control maintenance on Waste Rock Dump E, and demonstrate stability prior to financial assurance release for this mine unit.

If you have any questions, please contact George Llewellyn at (575) 956-1549.

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



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**Michelle Lujan Grisham**  
Governor

**Howie C. Morales**  
Lt. Governor

**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

**MEMORANDUM**

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**DATE:** March 11, 2020

**TO:** Anne Maurer, Mining Act Team Leader  
Mining Environmental Compliance Section, Ground Water Quality

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

**RE:** **Request for Comments, Revision 19-1, Partial Release of Financial Assurance and Change to the Permit Boundary, Dicaperl Minerals Corporation, Socorro Mine and Mill, New Mexico Mining Act Permit No. SO001RE**

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**

Air Quality Permit No. 0042-M6-RI was issued on August 15, 2012 by the AQB to *Dicaperl* Minerals Corporation ("Dicaperl") pursuant to the Air Quality Control Act (Act) and regulations adopted pursuant to the Act including 20.2.72 NMAC, *Construction Permits*, and is enforceable pursuant to the Act and the air quality control regulations applicable to this source. This permit authorizes the modification and operation of the *Dicaperl* Perlite Mining and Processing Facility (Facility). The function of the facility is to mine, crush, screen, and dry perlite, finish processing through use of expansion furnaces, and loadout of perlite products for commercial distribution.

A new Air Quality Permit Application, No. 0042-M7 for the facility was ruled administratively incomplete by the AQB on February 10, 2020.

**Details**

The applicant, *Dicaperl* is requesting a modification (19-1) to their Socorro Mine and Mill permit, SO001RE, to modify their Closeout Plan. Those modifications comprise the following: (1) partial release of Financial Assurance in the amount of \$63,010 on Dumps B, C, D, E, and F,

which have been regraded and seeded; (2) request for permit boundary change to that of the property boundary; (3) request for the change of the pit walls to 2:1 slope, and indicating the submittal of a slope stability analysis workplan.

The 675-acre site is located in Township 3 South, Range 1 West, Sections 21, 22, 27 and 28, approximately 3 miles southwest of Socorro, New Mexico in Socorro County.

### **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 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**

Work related to pit wall re-sloping and activities that could affect air quality are subject to the regulations and recommendations listed above.

There are no implications for air quality in the release of financial assurance and the boundary change. The AQB, therefore, defers to the Director of MMD for those determinations, pursuant to 19.10.12 NMAC (financial assurance release).

The AQB has no objection to the current request for permit modification.



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**

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**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

**MEMORANDUM**

Date: February 27, 2020

To: Anne Maurer, Mining Environmental Compliance Section

From: John Moeny, Watershed Protection Section, NMED-SWQB

Subject: Request for Comments, Revision 19-1, Partial Release of Financial Assurance and Change to the Permit Boundary, Dicaperl Minerals Corporation, Socorro Mine and Mill, New Mexico Mining Act Permit No. SO001RE.

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On January 21, 2020, SWQB received a request for comments from the Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department regarding three components of the referenced mine permit. These three components include: the Partial Release of Financial Assurance (FA) associated with the costs to complete the earthwork portion of reclamation at the Socorro Mine and Mill, a request to expand the permitted mine boundary to align with the property boundary on the west and southwest boundary, and finally a request to change the slope of the quarry pit walls at mine closure from 3:1 to 2:1 slope. Pursuant to 19.10.3.304.H NMAC, SWQB has prepared the following comments.

On the matter of partial release of FA for completed earthwork, the SWQB views the rilling and erosion at dump E (photo below) as demonstrative that this location is unlikely to achieve long term stability and a "self-sustaining ecosystem" as described in the Mining Act for post-mining land use. The SWQB does not recommend release of FA at Dump E. Further, the SWQB recommends considering objective performance criteria for the earthwork portion of reclamation beyond completion of "slope, drainage, and cover placement" to include actual soil stability and hydrologic functions as measured through site attributes such as rilling, water flow patterns, pedestalling or terracing of vegetation, gully formation and soil loss before contemplating FA release. Numerous technical publications detail these objective measures of site stability and soil health including this manual jointly produced by the BLM, USGS and NRCS titled "Interpreting Indicators of Rangeland Health" published in 2005 and available here: [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1043944.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1043944.pdf)

On the matter of expanding the permit boundary to align with the property boundary, the SWQB has no concerns for the expansion of the permit boundary.

On the matter of changing pit wall slope from 3:1 to 2:1 at mine closure, the SWQB would prefer to retain the 3:1 slope, but given the proposed bench-slope-bench terraced configuration for the pit wall at closure, the SWQB believes this will produce long term stability and be protective of water quality, provided that the slope stability analysis provided by the operator demonstrates competency of the underlying pit wall material.

For questions related to these comments, please contact John Moeny, SWQB, at 575-956-1545.



*Figure 1. Gully formation and erosion at Dump E.*



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

January 23, 2020

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

Re: HPD Log#112326, Request for Comments on Revision 19-1, Permit SO00IRE, Socorro Mine and Mill

Dear Ms. Johnson:

I am writing in response to your request for comment on the above referenced mine and mill permit revision received at this office January 21 2020.

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 permit 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.

Although there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties, the permit area has never been archeologically surveyed; therefore this office recommends a cultural resources survey be conducted on any undisturbed portions of mine property where proposed new ground disturbance will occur for this permit.

This survey should be performed by a qualified professional to determine if any historic or archaeological properties are present and if so, to provide documentation of those resources to our office. This information can then be used to evaluate the National Register of Historic Places eligibility of any resources identified during the survey and determine project effects on those resources. A list of state permitted archaeologists and archaeological firms are available from this office upon request or can be downloaded from our web site at:

<http://www.nmhistoricpreservation.org/documents/consultants.html>

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](mailto:richard.reycraft@state.nm.us)

Sincerely,

*Richard Reycraft*

Richard. Reycraft  
Staff Archaeologist



DIRECTOR AND SECRETARY  
TO THE COMMISSION  
Michael B. Sloane

## STATE OF NEW MEXICO DEPARTMENT OF GAME & FISH

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Placitas

17 March 2020

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

***RE: Revision 19-1, Socorro Mine and Mill, Permit No. SO001RE; NMDGF No. 19683.***

Dear Ms. Johnson:

The New Mexico Department of Game and Fish (Department) has reviewed the proposed permit revision referenced above. Dicaperl Minerals Corporation (Dicaperl) is requesting a change to permit boundary, pit expansion, and partial financial assurance release for completed earthwork on Waste Rock Dumps B, C, D, E, and F. On 5 February 2020, a site inspection was conducted with staff from the Department, MMD, the New Mexico Environment Department, and the Operator.


Waste Rock Dump E has significant erosion channels that have formed on the western portion of the reclamation. Significant rilling has also occurred on the north facing slope that needs to be remediated, and re-seeded as necessary. In addition, fugitive perlite dust from the milling facility is accumulating in significant amounts on the western portion of the reclaimed area, as well as on the undisturbed up slope habitat that is directly above Waste Rock Dump E.

The Department recommends that adequate financial assurance is retained by MMD until Dicaperl successfully remediates the erosion on Waste Rock Dump E, and re-seeds those sections of the north facing slope where the vegetation growth is sparse. The Department also recommends that MMD work with Dicaperl to address how to control windblown fugitive perlite dust from escaping the milling facility area and impacting reclamation sites and adjacent undisturbed habitat.

For all re-seeding that Dicaperl does on the mine reclamation sites, the Department recommends that only native plant species are used in the reclamation seed mix. The Department also recommends that the seed mix and mulch be certified weed-free, and that seed test results are requested from the vendor in order to avoid inadvertently introducing non-native species to the reclamation site. Any alternate seeds used to substitute for primary plant species that are unavailable at the time of reclamation should also be native. When possible, the Department recommends using seeds that are sourced from the same region and habitat type as the reclamation site.

Thank you for the opportunity to review and comment on the request for partial financial assurance release. If you have any questions, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 476-8159 or [ronald.kellermueller@state.nm.us](mailto:ronald.kellermueller@state.nm.us).

Sincerely,

**Matt Wunder, Ph.D.**  Digitally signed by Matt Wunder,  
Ph.D.  
Date: 2020.03.17 14:30:16 -06'00'

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