

From: [Myers, Kevin, EMNRD](#)
To: [Frank Bain](#)
Subject: Amended Surface Water Quality Bureau Comments
Date: Friday, February 16, 2024 1:06:00 PM
Attachments: [2024 0213 Ammended SWQB comments Minimal Impact Exploration Permit Lordsburg Playa Project MOD 23-1 H1018EM.pdf](#)

Good Afternoon, Frank,

See attached comments from the NM Environment Department's Surface Water Quality Bureau (SWQB).

These amend and replace the SWQB's comment from the October 2023.

MARP will evaluate these amended comments when considering the draft permit conditions.

Let me know if you have any questions.

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MEMORANDUM

February 13, 2024

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

From: Davena Crosley
Watershed Protection Section
Surface Water Quality Bureau (SWQB)

Subject: **Amended SWQB comments to October 13, 2023 for Request for Review and Comment, Minimal Impact Exploration Permit, Lordsburg Playa Lithium in Brine Exploration Drilling, Hidalgo County, New Mexico, Mining Act Permit No. Mod 23-1 H1018EM**

On September 12, 2023, NMED received a request for comments regarding a modified minimum-impact exploration permit application submitted by Frank Bain ("Applicant"). The project is in Hidalgo County, approximately 17 miles west of Lordsburg on public lands managed by the Bureau of Land Management.

Summary of Proposed Action

The Applicant would like to bore six 6-inch diameter holes to depths of no more than 500 feet from six drill pad locations. Each drill pad will require a cleared area approximately 75' x 40' with six separate unlined mud and fluid pit approximately 10' in length x 6' wide x 8' in depth. Existing roads and rights-of way will be utilized to access drill locations and total disturbance is estimated at 3.225 acres.

Relevant State and Federal Water Quality Regulations

Mine activities may affect Surface Waters of the State as defined in New Mexico's Standards for Interstate and Intrastate Surface Waters (20.6.4.7 NMAC), including precipitation dependent playa lakes within the mining operations, which are subject to 20.6.4.98 NMAC. Furthermore, operations must ensure compliance with New Mexico's water quality standards including General Criteria, which "*...are 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.*" (20.6.4.13 NMAC)

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 recommends the following mitigation measures to avoid surface water contamination and to protect surface and groundwater quality during and after project activities:

- Implement Best Management Practice (BMPs) identified in the permit application to protect Surface Waters of the State. At no time should construction materials including fuel, oil, grease or other contaminants be staged or stored in flood prone areas during the summer monsoon season, typically July-September.

- Utilize a secondary containment system for fuel, oil, hydraulic fluid, lubricants, and other petrochemicals to prevent spills. During the summer monsoon seasons, typically July-September, store these materials outside of the flood-prone zone.
- Do not use pits and drill holes as disposal sites for oil, gas, grease or other potential contaminants to surface and ground water.
- Ensure appropriate spill clean-up materials such as absorbent pads are available on-site at all times during road construction, site preparations, drilling and reclamation to address potential spills.
- Contain process water within the closed-loop system or lined pits. Do not discharge process water to the ground or to the playa unless a discharge permit is secured from the USEPA and/or NMED.
- Minimize playa impacts by limiting the number of trips crossing the playa.
- Whenever possible, move drill holes, drill pads, mud/fluid pits out of the playa and provide a minimum 50-foot setback from any playas and other Surface Waters of the State to drill pads and staging areas.
- Perform all work in the dry season and postpone work during wet and muddy conditions. If vehicles and heavy equipment could create ruts in the playa, delay work to prevent damage to the playa. In general, if a precipitation event is equal to or greater than 0.25 inches within 24 hours occurs, delay work in the playa.
- Segregate and store distinct layers of soil as they are excavated from pits. Upon project completion, backfill pits with the segregated layers of soil, replicating the original soil layers. Restoring the playa's soil layers will help to protect its natural functions.
- Size pits to prevent overtopping during precipitation events. If stormwater controls are not implemented, stormwater will enter the playa and concentrate pollutants in the playa's basin. The playa that is located within the project area is a potential pathway to groundwater. Proper sizing of pits will help to protect both surface and groundwaters.
- Line pits to prevent transport of water contaminants to groundwater or surface water. Playas can concentrate pollutants because of their basin nature, but also serve as pathways to groundwater either by direct drainage below the playa or by fracture zones that connect the playa to underground flow.
- Utilize Best Management Practices to reduce soil compaction by stationary trucks and heavy equipment by using ground protection matting under tire areas.
- Re-grade the site to pre-construction elevation and topography during reclamation to preserve run-on hydrology to the playa.
- Record pre- and post-conditions of the playa in areas disturbed by the project operation with repeat photo points. Copy SWQB on final reports to MMD to confirm reclamation of the site to SWQB.
- Copy SWQB staff on notifications to MMD for project mobilization. Please copy Davena Crosley at davena.crosley@env.nm.gov.

To understand the site hydrology and better characterize the playa for maintenance and reclamation, SWQB recommends that the permittee conduct, the following studies prior to exploration activities:

- Map all playa(s) in the project area that may be impacted by drilling, drill pads, mud or fluid pits, or overland travel.
- Map all drainageways that drain to the playa(s) within the project area.
- Sample playa soils to determine shrink/swell clay content and depth.
- Sample vegetation as an indicator of playa inundation frequency.
- Install instrumentation to measure infiltration below playa and annulus.

If you have any questions, please contact Davena Crosley (NMED-SWQB) at 575-636-3425 or davena.crosley@env.nm.gov.