STATE OF NEW MEXICO
BEFORE THE WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF:
TWO PETITIONS FOR REVIEW OF THE
SECRETARY’S DECISION TO ISSUE
DISCHARGE PERMIT NO. DP-1840
FOR THE COPPER FLAT MINE,
ELEPHANT BUTTE IRRIGATION
DISTRICT, and,
TURNER RANCH PROPERTIES, L.P.
HILLSBORO PITCHFORK RANCH, LLC,
AND GILA RESOURCES INFORMATION
PROJECT,
Petitioners.

Docket No. WQCC-19-02 (A)

APPEAL TO THE WATER QUALITY CONTROL COMMISSION OF THE DECISION OF THE SECRETARY OF ENVIRONMENT GRANTING DP-1840 TO THE NEW MEXICO COPPER CORPORATION

NEW MEXICO ENVIRONMENT DEPARTMENT’S RESPONSE BRIEF TO ELEPHANT BUTTE IRRIGATION DISTRICT AND TO TURNER RANCH PROPERTIES, L.P., HILLSBORO PITCHFORK RANCH, LLC, AND GILA RESOURCES INFORMATION PROJECT

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DISCHARGE PERMIT DP-1840 (the “Permit”) was issued by the Secretary of Environment for the proposed Copper Flat Mine after a 7-year process. The application was evaluated by a number of technical experts within the New Mexico Environment Department (“NMED” or “Department”) and DP-1840 was drafted in accordance with the requirements of the Copper Rule, 20.6.7 NMAC, which is designed to be protective of all groundwater at places of withdrawal for present or reasonably foreseeable future use (“places of withdrawal”). The Copper Flat Mine is proposed to be located at the site of a pre-existing mine which was operated for a short period during the 1980s. The Permit requires New Mexico Copper Company (“NMCC” or “Permittee”) to move forward with Stage 1 abatement plan activities to further characterize existing ground water impacts on a fairly aggressive schedule. In addition to characterization activities, the Permit requires reclamation of several existing mine units that have the potential to impact water quality. The Permit has deadlines for completion of these activities that are independent of initiation of mining at the site. Without the Permit in place, this remediation would be less likely be completed as scheduled. If the facility is operated in accordance with the Permit, no further groundwater contamination above groundwater standards is expected to occur, either during operations, or after closure.

Had the Department concluded that operation of the Copper Flat Mine according to the terms of the Permit would cause either a) an exceedance of groundwater standards at any place of withdrawal, b) an undue risk to property, or c) a hazard to public health, the Permit
would not have been issued. Further, had the Department determined that the andesite rock underlying much of the facility had been inadequately characterized or that the proposed monitoring well network was insufficient, the Department would have required additional characterization or additional monitoring wells before issuing the Permit.

II. Summary of the Permitting Process

The original application for a discharge permit was submitted to the Department by the Permittee in 2011. [AR-00299 to 01709]. A revised application to meet the requirements of the Copper Rule was submitted on December 11, 2015, and the application was deemed technically complete on February 1, 2018. Before deeming the Discharge Permit Application technically complete, NMED issued three letters requesting additional information from the applicant in addition to four other comment letters related to the technical review of the application and documents that are part of the Discharge Plan. The three letters requesting additional information contained a total of 73 items requiring response from the applicant and approval from NMED in order for the application to meet the technical completeness requirements of the Copper Mine Rule. A draft permit was public noticed on February 2, 2018. [AR 17417 to 17420]. The Department extended the public comment period for this draft by an additional 60 days beyond the initial 30-day period (90 days in total) and received numerous comments. NMED made changes to the draft permit in response to several of the public comments. These changes imposed additional requirements on the Permittee, including additional new monitoring wells. Hearing Officer’s Proposed Findings of Fact and Conclusions of Law, p. 59, ¶ 378.
Included with the public comments were a number of requests for hearing, which the Secretary granted. The hearing took place over a 5-day period from September 24-28, 2018, and the record, consisting of 18,985 pages, was closed at the end of the hearing. The hearing officer’s report was issued on December 3, 2018 and the Secretary issued the permit on December 21, 2018.

III. Description of the Facility

The copper deposit proposed to be mined is located within “Copper Flat”, a volcanic deposit consisting of mostly quartz monzonite, a non-porous crystalline rock with relatively poor conductivity for groundwater. Hearing Officer’s Proposed Findings of Fact and Conclusions of Law, p. 27, ¶ 160. The pre-existing copper mine at this site was operated for four months during the 1980s, by a different operator, creating a shallow open pit, waste rock stockpiles, and an unlined tailing storage facility, which resulted in some impacts to groundwater. The proposed facility will consist of an enlarged open pit within the quartz monzonite, two waste rock stockpiles set on andesite bedrock and one set within the open pit surface drainage area, and a lined tailing storage facility. Water removed from the open pit to facilitate mining will be used for dust suppression or returned to the process reuse circuit. Ore removed from the open pit will be milled and run through a floatation circuit to separate the concentrated metal ores from the tailing. The resulting ore concentrates will be transported off-site for additional processing, while the remaining sand and fine particulates (“tailing”) are piped in a slurry to the Tailing Storage Facility. All major pipelines will be situated within a lined pipeline corridor or atop geomembrane liners. Impoundments that store process water for long-term storage require additional engineering controls (i.e., double-synthetic liners with leak detection).
compared to impoundments intended to store solutions for less than 30 days, which require a single synthetic liner. The Permit requires the Tailing Storage Facility to be lined with a thicker, 80-mil synthetic geomembrane liner.

At closure, the Permit requires that the waste rock stockpiles be re-graded to minimum 3:1 (horizontal to vertical) slopes, and that a minimum three-foot-thick evapotranspiration soil cover be applied to each waste rock stockpile to minimize stormwater infiltration. The Tailing Storage Facility will be allowed to dewater over a period of years, and then covered with a three-foot-thick evapotranspiration soil cover system. The open pit will be rapidly filled using water that meets groundwater (3103) standards to prevent oxidation of minerals within the pit walls, and will then become a permanent evaporative sink, such that impacted groundwater from within the area of open pit hydrologic containment will flow towards the open pit and no impacted water from the pit will be discharged into groundwater.

IV. Description of the Permit

DP-1840 is exclusively a permit to regulate the discharge of water contaminants to protect groundwater and surface water for present or reasonably foreseeable future use, and to abate ground and surface water. It is not a permit to pump groundwater for use at the mine, nor does it allocate any water for this purpose. The Permit is but one of a number of different permits required to construct and operate the proposed mine. In addition to the Permit, NMCC will need authorization independently from the Bureau of Land Management, the Office of the State Engineer, and the Mining and Minerals Division of the Energy Minerals and Natural Resources Department before operations can begin.
The Permit has enforceable conditions requiring new monitoring wells and a timeframe for installation. It requires financial assurance and reclamation of several existing stockpiles within a few years, regardless of the timeframe for operating the mine. The Permit requires that the new Tailing Storage Facility be lined with an 80-mil synthetic liner, which exceeds the requirements of the Copper Rule. The Permit requires the installation of numerous monitoring wells around the perimeter and downgradient of each mine unit.

The Permit contains requirements for spill response and other contingencies, as well as periodic sampling from the extensive network of monitoring wells. If an exceedance or even a trend toward an exceedance is detected in any of these monitoring wells, the Department may require investigation and a corrective action plan to be implemented to abate any impacts to groundwater.

V. The Future Open Pit Water Body Will Not Be a Water of the State.

The future water body that will be formed in the open pit after closure will be located more than a hundred of feet below the surface of the surrounding area, and exclusively on private land. It will form an evaporative sink, meaning that ground water will flow into the pit from all directions and evaporate, and no water from the pit will discharge into groundwater. At the end of mining operations, the open pit will be filled to the modeled equilibrium water level where evaporation matches groundwater inflow. Submerging the pit walls will prevent oxidation of minerals exposed in the pit walls. Initial water quality of the pit water body will be the same as the groundwater used to create it, which meets groundwater standards. Over time water quality will degrade due to evapoconcentration, but in general the water quality will be fairly good due to partial reclamation within and around the pit rim and the submergence of
the pit walls with the rapid refill. In fact, as noted in the Hearing Officer’s Report, the water quality is expected to remain better than that of the current, shallow pit lake. Hearing Officer’s Report, page 22; Tr. pp 502-504. Due to the depth of the pit water body below the surrounding ground surface, and the 25-foot high benches, access will be restricted. The water body is predicted to remain an evaporative sink indefinitely.

The future pit water body will not be a water of the state because it will be on private land, and water flowing into the pit will not discharge into groundwater, but will instead gradually evaporate, and thus have no negative effect on ground or surface water.

“This is in alignment with the Copper Rule which effectively grants a variance by rule from groundwater standards within the area of open pit hydrologic containment. The Copper Rule acknowledges that impacts to groundwater are likely to occur from open pit copper mining. The New Mexico Supreme Court acknowledged that the most appropriate mechanism to mitigate these potential impacts is through containment resulting from evaporation of the open pit water body.”


VI. The Secretary Carefully Considered Whether There Would Be an Undue Risk to Property or a Hazard to Public Health When Deciding to Issue the Permit.

A. Issuance of the Permit Will Not Cause an Undue Risk to Property, Because the Permit Is Protective of Groundwater, and Does Not Allocate Any Water for Use at the Mine.

The phrase “undue risk to property” as used in both the Copper Rule and the Water Quality Act means undue risk to property from the contamination of ground or surface water above the numerical standards found at 20.6.2.3103 NMAC. The Secretary did consider this factor in issuing the Permit, concluding that the conditions imposed by the Permit would prevent exceedances of water quality standards at any place of withdrawal of water for present or reasonably foreseeable future use. Issuance of the Permit will not result in any undue risk to
adjacent or down-gradient property. Secretary’s Final Order, Additional Findings and
Conclusions, ¶ 14.

DP-1840 authorizes the discharge of water to the tailing storage facility and various
other lined impoundments, as well as surface applications of water for dust suppression and
other purposes. It contains requirements for the construction of these impoundments, as well
as pipelines and other conveyances between them, designed to prevent impacted mine water
from affecting the underlying groundwater. It also specifies that waste rock stockpiles must be
constructed to direct stormwater runoff to lined impoundments for eventual use as process
water. The Permit requires a material handling plan to assure that any acid-generating
materials deposited in the waste rock stockpiles are buffered and requires the installation of an
evapotranspiration cover at least 3 feet thick to be installed at closure to minimize infiltration
and leaching of stormwater.

DP-1840 does not authorize NMCC to pump groundwater or divert water for use at the
mine and does not allocate water for use at the mine. Final Order, Additional Findings and
Conclusions, p. 3, ¶ 5. The Department does not have that authority under the Water Quality
Act. The brief from the Elephant Butte Irrigation District (“EBID”) at pages 6-7 suggests including
a permit condition requiring the Department to coordinate with OSE and the Rio Grande
Compact Commission and other water users on water rights issues and impacts from
drawdown. However, the Permit was issued to NMCC, not NMED, and it would be illogical for
Permit conditions to apply to the Department. The EBID brief also suggests permit conditions to
address potential impacts to water users, but OSE already does this under their authority to
grant water rights. Similarly, the discussion on OSE Dam Safety requirements demonstrates that
OSE Dam Safety Bureau, rather than NMED, is the right agency to review those features and regulate as appropriate.

OSE Dam Safety Bureau is charged with evaluating failure scenarios and requiring controls to ensure there is no catastrophic failure. OSE Dam Safety Bureau does coordinate with NMED to determine the hazard ranking for a dam based on potential for environmental damage if there is a failure. This alone makes it a “significant” hazard ranking. Loss of life in the event of dam failure would be a “high” risk hazard ranking. The engineering design requirements are different for each hazard ranking, and are reviewed and enforced by the OSE Dam Safety Bureau. NMED does not have the legislative authority to regulate this feature of the mine, and OSE is the only entity in the state that is both authorized and qualified to do so.

The EBID brief at pages 11-12 states that, “Even though water rights are typically not within the purview of the New Mexico Environment Department, there is no justification for ignoring certain property rights when considering discharge permits for copper mines given the Copper Rule’s requirement that property rights be considered.” It is not clear how EBID would suggest that the Department justify consideration of certain property rights for which it has no jurisdiction while ignoring other property rights for which it has no jurisdiction when evaluating a discharge permit application. Such a determination would be arbitrary and capricious at best, and as EBID states, result in the Department asserting authority over issues beyond the scope of the Water Quality Act. The example cited by EBID on page 12 for the Pecos River clearly shows that OSE already does the evaluation EBID is suggesting NMED should be responsible for. What EBID is proposing would be akin to requiring OSE to make an evaluation on water quality resulting from a discharge of water they granted a water right for.
The EBID brief on page 13 acknowledges that NMED does not have the authority or expertise to weigh in on property ownership issues. EBID states that they are not expecting the Department to take jurisdiction over these issues. But they are suggesting that we do just that by including permit conditions preventing the depletion of water.

The EBID brief at page 14 suggests that the Permit should not be issued until NMCC receives OSE approval to use water. However, since the mine cannot operate without the water rights there is no logical reason to include this type of condition. The next argument concerning what would happen if NMCC were to win their water rights appeal is likewise confusing. It appears as if EBID expects the Department to step in and overrule the courts in the event NMCC prevails over OSE in their water rights litigation.

B. Issuance of the Permit Would Not Create a Hazard to Public Health.

The argument in EBID’s brief on the issue of hazard to public health assumes there will be contamination, or that there is no contingency in the event of catastrophic failure of the tailing dam. Contrary to the statements in EBID’s brief that “substantial evidence” was presented concerning the “likelihood of contamination” the Permit is protective of water quality and NMED successfully demonstrated that fact at the hearing.

The EBID brief at pages 7-8 claims that their Proposed Findings of Fact “established” there would be groundwater contamination from the mine operation. The Hearing Officer’s Report based on the evidence provided at the hearing is not in agreement with this proposed finding. Hearing Officer’s Report, p. 27. Samples regularly collected from the many monitoring wells around the perimeter and downgradient from each mine unit are required to be analyzed to detect even a trend towards an exceedance of groundwater standards. Were such a trend
detected, NMCC would be required to investigate the cause and initiate remediation or abatement of the affected groundwater.

VII. The Andesite Bedrock Underlying the Proposed Waste Rock Stockpiles Was Adequately Characterized.

The administrative record contains many pages of test results evaluating the conductivity of the andesite bedrock upon which the proposed waste rock stockpiles will be placed. There was extensive expert testimony at the hearing which described this testing in great detail, and the results of multiple lines of evidence show quite convincingly that the andesite displays low conductivity and low permeability with respect to groundwater. As acknowledged in the Ranches brief, three of the “wells” described in petitioner’s testimony were shallow test pits carved into the bed rock that yielded little to no groundwater.

As stated in the Department’s testimony at the hearing, the Copper Mine Rule requires that an applicant conduct an aquifer evaluation for stockpiles located outside the Open Pit Surface Drainage Area to determine the possible need for an interceptor system. The aquifer evaluation for Waste Rock Stockpiles Number 2 and Number 3 concluded that discharges from these waste rock stockpiles are not expected to result in an exceedance of groundwater standards, due to the relatively low acid-generating potential of materials to be placed in these stockpiles. Considering the placement of the stockpiles on low permeability andesite bedrock, the demonstrated geochemistry of the waste rock [RP 05649-05651], the integrated solution capture systems, and the strong monitoring plan, NMED does not anticipate that contaminants generated from these stockpiles will impact groundwater above the standards set forth in Section 20.6.2.3103 NMAC. In addition, NMCC has also proposed a robust material handling plan that places the potentially acid-generating waste rock material between layers of waste.
rock that is not acid generating. In the event that the monitoring indicates that standards could be exceeded, there are provisions in DP-1840 which could result in NMED requiring installation of an interceptor system or implementation of other source-control measures.

Waste Rock Stockpile Number 1 will be constructed inside the projected Open Pit Surface Drainage Area. Waste rock with a higher potential to develop acid rock drainage will be placed within the authorized footprint of this waste rock stockpile [RP 15918]. Any potential impacts to groundwater from stockpiles located inside the Open Pit Surface Drainage Area will be contained by the Area of Open Pit Hydrologic Containment.

The Department closely and carefully examined the characterization of the andesite during the evaluation of the permit application, and determined that the andesite was a suitable low-permeability surface upon which to place the waste rock. Had there been a question as to the adequacy of the characterization of the andesite, the Department would simply have required more testing during the multi-year permitting process. In part due to the extensive history of various companies mining or attempting to mine this deposit, the andesite at this site has actually been extensively studied over many years, and is considered to be a generally well understood geologic formation.

VIII. The Department Has Already Increased the Number of Monitoring Wells Required, and There is No Need to Further Increase the Number of Monitoring Wells.

DP-1840 requires that NMCC monitor and report water quality information from a total of fifty-six compliance sampling locations at Copper Flat Mine. Nineteen existing monitoring wells have been incorporated into the proposed DP-1840 monitoring network in accordance with Paragraph (1) of 20.6.7.28.B NMAC, and the permittee will be required to install an additional 24 monitoring wells for groundwater compliance sampling to fulfill additional
location requirements referenced in Subsection B of 20.6.7.28 NMAC. In addition, DP-1840 designates five surface water sampling points along Grayback Arroyo, and eight process water sampling points throughout Copper Flat Mine. The monitoring plan set forth in DP-1840 adequately fulfills the requirements of Subsection R of 20.6.7.11 NMAC and Section 20.6.7.28 NMAC. Reid Written Testimony, p. 16-17, lines 16-22 and 1-2.

There are nineteen monitoring wells proposed to monitor groundwater around the perimeter of the tailing storage facility which satisfies the requirements of Paragraph (2) of 20.6.7.28.B NMAC. DP-1840 requires nine monitoring wells be used to evaluate groundwater conditions around the perimeter of Waste Rock Stockpiles 2 and 3. This subset of wells will be adequate to monitor potential groundwater impacts from the waste rock stockpiles and satisfies the requirements of Paragraph (2) of 20.6.7.28.B NMAC.

As conditioned in Section C114 of the Permit, Section 20.6.7.30 NMAC of the Copper Rule provides for replacement monitoring wells to be installed for a number of reasons, including, but not limited to, monitoring wells not located correctly, not containing sufficient water to monitor groundwater quality or, if the monitoring well “does not adequately monitor the contamination source it is intended to monitor” (20.6.7.30.B NMAC). As such, as construction of the mine commences and continues, the Department will use the new data generated from the monitoring wells to determine groundwater flow, gradient, and quality to determine the need and location of additional wells. In addition, as both the open pit and the tailing storage facility grow, the proximal monitoring wells to these mine units may need to be plugged and abandoned. NMED will evaluate groundwater conditions as this occurs and may
require replacement monitoring wells pursuant to Subsection B of 20.6.7.30 NMAC. Reid Written Testimony p.17, lines 6-8.

The proposed network was determined to be adequate by the Department’s expert staff that reviewed the application and drafted the Permit. The final version of the Permit does require additional monitoring wells compared to the draft permit. These additional wells provide a degree of overlap and redundancy. However, it should be noted that the Permit contemplates (and the Copper Rule specifically provides) that the Department will continue to evaluate the placement and efficacy of the monitoring well network as the mine develops and will require the installation of additional wells at any time it deems appropriate.

IX. Financial Assurance

No disturbance can take place at this mine until financial assurance is in place. Financial assurance will be held jointly by the BLM, MMD, and NMED, subject to the written agreements in place between these three agencies. Negotiations concerning financial assurance have continued between these agencies and NMCC in the months following the hearing. An agreement as to the total amount of financial assurance (~$70 million) is close, and agreement as to the instruments must be reached and those instruments must be put in place before mining can begin. No corporate guarantee is permitted, so the financial assurance mechanism must be either cash trust, a letter of credit, or surety bond.

The Ranches suggest in their brief that there is no due process for a public hearing on the financial assurance proposal. As stated during the hearing, the New Mexico Mining Act has extensive and prescriptive rules governing financial assurance. The WQCC regulations do also require financial assurance, but have no financial assurance rules. Following agreement
between MMD, NMED, and BLM on the proposed cost estimate and financial assurance estimate MMD will issue a permit pursuant to the Mining Act. MMD cannot issue a Mining Act permit until it receives an Environmental Determination from the Secretary of Environment that all environmental standards will be met. As testified at the hearing, the Department will not issue that determination until the cost estimate and financial assurance requirements have been determined to ensure protection of all environmental standards over which the Department has authority. The Mining Act permit may be appealed by any party, with a hearing before the New Mexico Mining Commission, and appellate courts beyond that, thus due process requirements are met. The Department testified at the DP-1840 hearing that it would participate in the Mining Act hearing to provide testimony in support of the environmental protection afforded by the approved financial assurance cost estimate and instrument.

X. Conclusion

Throughout the briefs, Petitioners continually conflate the discharge permit with a permit to operate the mine, and continually confuse the Department’s charge to protect water quality with the Office of the State Engineer’s exclusive authority to allocate water and determine rights to its use. While the Department certainly acknowledges the importance of issues such as water depletion, and other possible non-water quality impacts of mining, as well as the biological diversity of places such as the Ladder Ranch, the fundamental issue before the WQCC in this appeal is whether or not DP-1840 is protective of groundwater quality at places of withdrawal.

In its multi-year review of the science, and the many thousands of pages of tests results and data, the Department concluded that, for this mine in this location, it could draft a permit
that allowed use of this resource while assuring protection of groundwater quality for future use by the surrounding ranches and other property owners. That permit is DP-1840, which complies with the requirements of both the Water Quality Act and the Copper Rule. The Department respectfully requests that the Commission uphold the permit, which is protective of public health and welfare and the environment.

Respectfully,

NEW MEXICO ENVIRONMENT DEPARTMENT

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I hereby certify that, on the 16th of July 2019, the foregoing was served either electronically or in-person to the following:

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