

STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF PROPOSED AMENDMENTS
TO 20.6.2, THE COPPER MINE RULE,

No. WQCC 12-01(R)

New Mexico Environment Department,
Petitioner.

**CLOSING ARGUMENT OF ATTORNEY GENERAL
IN SUPPORT OF ADOPTION OF JOINT PROPOSAL
FOR THE COPPER MINE RULE**

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Preliminary Statement

The New Mexico Environment Department (“NMED”) proposes to undo 36 years of ground water protection in New Mexico by authorizing through rule extensive contamination underneath copper mine sites. This radical shift in interpretation of the Water Quality Act (“WQA”) and NMED practice comes at a time when it is more critical than ever to protect New Mexico’s scarce water resources.

The WQA protects from contamination above water quality standards “any place of withdrawal of water for present or reasonably foreseeable future use.” NMSA 1978, § 74-6-5(E)(3). NMED’s Proposed Copper Mine Rule (“Proposed Rule”) intentionally allows contamination above water quality standards at places of withdrawal. Instead of protecting aquifers with a present or future use, the Proposed Rule establishes a “point of compliance” regulatory system that allows pollution above standards underneath sources of contamination up to a designated monitoring well some distance away. At the Tyrone Mine, for example, the area of sanctioned ground water contamination would extend approximately 9 square miles – nearing Tyrone’s permit boundary -- in a region of the State where the State Engineer predicts demand for water will outstrip supply in the next 30 years.

Protection of ground water quality in New Mexico is not mutually exclusive of economic development and, in particular, of economically viable copper mining in New Mexico. Both goals are achievable. The Attorney General urges the Water Quality Control Commission (“Commission”) to protect the ground water of our state for this generation and future generations by rejecting NMED’s Proposed Rule and by adopting a more balanced approach, as set forth in the Joint Proposal offered by the Attorney General and other parties.

Argument

I. NEW MEXICO'S SCARCE GROUND WATER IS A PUBLIC RESOURCE THAT SHOULD BE PROTECTED NOW MORE THAN EVER

In New Mexico, ground water belongs to the public. It does not belong to private parties; rather, ground water may be used by private parties subject to appropriate authorization from the State. NMSA 1978, § 72-12-1.

New Mexico, as every Commissioner is aware, is an arid state with scarce water resources. We are heavily dependent on a clean ground water supply: ninety percent of our state's drinking water comes from ground water. Thomson Direct Test., p. 4 [AGO Ex. 16]. Dr. Bruce Thomson, one of New Mexico's leading water resource experts, put it succinctly:

It is widely recognized that the water resources in New Mexico are not sufficient to meet current needs let alone support future growth. Virtually every public water supply agency, every irrigation and conservancy district, and every industrial sector in the state is facing imminent water shortages and all are looking for new sources of supply to meet current and future needs.

Id. p. 5.

This is true, in particular, for southwest New Mexico, where New Mexico's major copper mines are located. The Office of State Engineer predicts the demand for water in the Silver City area will exceed supply by 2040. *Id.* p. 6. One of the most promising sources of new supply is from the Tyrone Mine itself – as the Commission has already recognized -- where up to 6,600 acre feet per year of water could be made available, not only for the Silver City area, but for areas beyond, such as Deming, Hatch and even Las Cruces. *Id.*; Roepke Test. (2007) and Phelps Dodge Proposal [AGO Ex. 23]; Comm'n Decision, FOF ¶¶ 253-58.¹ However, the increased contamination allowed at the Tyrone Mine site under the Proposed Rule puts this future water

¹ Decision and Order on Remand (Feb. 9, 2007), *In the Matter of Appeal of Supplemental Discharge Permit for Closure (DP 1341) for Phelps Dodge Tyrone, Inc.*, Nos. 03-12(A) and 03-13(A) ("Tyrone") [AGO Ex. 1] (referred to herein as "Comm'n Decision").

supply at greater risk because, as Dr. Thomson explained, the greater the concentration of sulfates and total dissolved solids (“TDS”) in the ground water, the greater the loss of the resource when treated. Thomson Direct Test., pp. 10-11.

The Proposed Rule opens the “flood gates” to every other commercial and industrial discharger in New Mexico to request the same treatment as Freeport McMoRan, Inc. (“FMI”) will receive: that is, that they too should be allowed to loosen or eliminate pollution prevention measures and to contaminate ground water underneath their sites. There are over 900 discharge permits in New Mexico. There is no principled basis to deny to these other dischargers – which include molybdenum mines, uranium mines, dairies, municipal waste water treatment plants, industrial facilities, power plants, large scale domestic waste systems, the federal laboratories such as Los Alamos National Laboratory, and the Waste Isolation Pilot Plant – treatment equal to FMI. Olson Direct Test., p. 25 [Olson Ex. 1].

Protection of our state’s water resources is more important now than ever because our state’s population continues to grow, placing more demand on the limited supply, and because of the predicted effects of climate change. While there is uncertainty in predictions of the specific effects of climate change in a specific location such as New Mexico, all models agree that the climate of New Mexico and the southwest will become warmer as a result of climate change. This will result in a more arid climate, less surface water available, possibly less recharge to ground water, and increased importance of ground water as a source of supply. Thomson Direct Test., pp. 7-8.

Historically, New Mexico has had one of the strongest ground water protection programs in the nation. *Id.* p. 5. As a matter of sound public policy, now is not the time to compromise those protections.

II. THE WATER QUALITY ACT PROTECT PLACES OF WITHDRAWAL

Under the WQA, a discharge may not result in an exceedance of standards at “*any* place of withdrawal of water for present or reasonably foreseeable future use.” NMSA 1978, § 74-6-5(E)(3) (emphasis added); *see also* NMSA 1978, § 74-6-12(F) (degradation of water quality allowed for beneficial use, but standards may not be exceeded). There is a 36 year history under the WQA and the Commission’s Regulations protecting places of withdrawal. The Commission, in 1977, first established the principle that *all* ground water with a TDS concentration of 10,000 milligrams per liter or less is protected from contamination above standards unless the discharger demonstrated the ground water did not have a present or future use. Comm’n Decision, FOF ¶ 60; *see* 20.6.2.3101 NMAC. As the Director of NMED’s predecessor agency explained to the United States Environmental Protection Agency in 1987, “Experience has shown that this relatively clear and easily understood system is very effective in protecting ground water quality in the state.” Comm’n Decision, FOF ¶ 62.

The Legislature adopted in 1993 the Commission’s protection of places of withdrawal, codifying the Commission’s language and NMED practice in Section 74-6-5(E)(3), protecting “any” place of withdrawal of water with a present or future use. New Mexico Laws of 1993, ch. 291, § 5.

For 36 years, NMED’s interpretation and practice under the WQA and Commission’s Regulations has been to protect ground water underneath discharge sites as places of withdrawal. Protection of ground water underneath sites has extended to copper mines. NMED discharge permits for copper mines did not allow contamination above standards and, when unauthorized contamination was discovered, NMED required abatement. Olson Rebuttal Test., pp. 3-6 [Olson

Rebuttal Ex. 1]; Menetrey Test., pp. 3, 6-17 [Olson Rebuttal Ex. 2]. The Proposed Rule would disregard the WQA's requirements, and loosen or eliminate those protections.

III. ONLY FMI HAS CHALLENGED PROTECTION OF PLACES OF WITHDRAWAL

In the State's decades-long history of protecting present and future water supplies, there has been only one significant challenge to the principle of protecting ground water underneath discharge sites. That challenge has come, relentlessly, from FMI and its predecessor, Phelps Dodge Corporation ("Phelps Dodge"). Phelps Dodge first challenged NMED's Tyrone Mine closure permit in 2002 in a two week hearing before NMED. Phelps Dodge then appealed closure permit issued by NMED in a 10 day hearing before the Commission in 2003, arguing *inter alia*, that it could pollute under its site. The Commission, in 2004, said it could not. Around that same time, there was an attempt to amend the WQA to allow copper mining companies to pollute under their sites. That legislation was rebuffed by the Legislature. Phelps Dodge appealed the Commission's first decision to the Court of Appeals, which upheld NMED on two grounds and remanded for the Commission to create factors to determine place of withdrawal. Phelps Dodge then argued before the Commission in the 24 day remand hearing in 2007 that it could pollute up to its property boundary. The Commission, in 2009, said it could not. Phelps Dodge appealed again to the Court of Appeals. On the eve of a change of administration, FMI entered into a settlement agreement with NMED, agreeing not to pollute above standards underneath its site unless it obtained variances, and stayed the appeal. That settlement, however, was tossed aside at the end stage of development of the Copper Mine Rule, when FMI once again pushed its agenda seeking to pollute underneath its mine sites.

For 10 years, through a mix of administrations, neither NMED nor the Commission nor the Legislature had agreed that FMI could pollute under its mine sites. Finally, however, FMI

has had success in persuading NMED to allow contamination under its site – essentially up to its permit boundary. AGO Statement of Reasons, §§ V, VI. As evidenced by the dramatic shift between August 17, 2012 draft rule, developed by Mr. Bill Olson and NMED technical staff through the Copper Rule Advisory Committee (“CRAC”) process, and the September 10, 2012 draft directed by NMED senior management and incorporating FMI’s proposals, the Proposed Rule is FMI’s rule.

FMI, an \$18 billion international mining company with revenues greater the State of New Mexico’s budget,² has been the only company to so forcefully raise this issue. AGO FOF ¶ 122³; FMI 2012 Form 10-K, p. 110 [AGO Ex. 31]. While other hard rock mining companies in New Mexico are looking for ways to protect ground water – New Mexico Copper Corporation (“New Mexico Copper”) intends to line its tailings impoundment; the molybdenum mine in Questa, New Mexico intends to make its tailings into paste – FMI and FMI alone continues with its aggressive push to pollute under its site. AGO FOF ¶¶ 373-75. The Copper Mine Rule will set precedent for the state and for all other 900 dischargers. One company’s agenda should not be allowed to push back 36 years of ground water protection and to risk New Mexico’s precious water resources.

IV. THE COMMISSION’S PRIOR FACTUAL AND LEGAL DETERMINATIONS ARE BINDING

Prior to the Commission’s 10 day hearing on the Proposed Rule, the Commission held 24 days of hearing on the factors that should be used to determine place of withdrawal under the WQA and whether portions of the Tyrone Mine site are places of withdrawal. *See generally*

² The New Mexico budget amounts to about \$6 billion in general fund appropriations and about \$14.7 billion in total funds. <http://www.nmlegis.gov/lcs/lfc/lfcdefault.aspx>. The Commission may take administrative notice of this fact. NMRA Rule 11-201.B(2) (judicial notice may be taken of facts capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned); Procedural Order, § 401.A (Nov. 21, 2012) (rules of evidence may be looked to for guidance in this proceeding).

³ “AGO FOF” refers to the Attorney General’s Proposed Findings of Fact in his Statement of Reasons.

Comm'n Decision. That adjudicatory hearing was held pursuant to order of the New Mexico Court of Appeals directing the Commission to "create some general factors or policies to guide its determination" as to what constitutes a "place of withdrawal" under the WQA. *Phelps Dodge Tyrone, Inc. v. N.M. Water Quality Control Comm'n*, 2006-NMCA-115, ¶ 35, 140 N.M. 464, 473, 143 P.3d 502, 511.

As a result of that proceeding, the Commission issued an 85 page decision, consisting of 332 Findings of Fact and 52 Conclusions of Law. The Commission established the factors to determine place of withdrawal and found many locations within the Tyrone Mine site to be places of withdrawal. *See generally* Comm'n Decision.

Specifically, the Commission held that the following factors must be considered in such a determination: site hydrology and geology, quality of water prior to discharge, past and current land use in the vicinity, future land use in the vicinity, past and current water use in the vicinity, and population trends in the vicinity. *Id.* COL ¶¶ 15-21.

The Commission applied those factors to the Tyrone Mine site, *id.* FOF ¶¶ 142-298, and determined found that "the regional and alluvial aquifers underlying portions of the Tyrone mine site are places of withdrawal of water for present and reasonable foreseeable future use pursuant to Section 74-6-5(E)(3)." *Id.* COL ¶ 33. The Commission specifically identified the following locations are places of withdrawal at the Tyrone Mine:

- Two drinking water wells, the Fortuna Wells;
- Six parcels within the mine site not owned by Tyrone or affiliates;
- The north side of the mine around the Mangas Valley Tailings Impoundment;
- The area west and to the east of the 1A Tailings Impoundment;
- An area immediately south of the 1A Tailings Impoundment;
- An area to the southeast of the 3A Stockpile and to the east of the 3B Waste Rock Pile;
- Open areas around the pits;
- The area on the east side of the mine south of the 5A Waste Rock Pile; an area south of the Gettysburg Pit;

- Areas on the southwest corner of the mine; an area to the west of the Gettysburg Pit, along the 1C Stockpile;
- Areas on the southeast side of the mine along and within Oak Grove Draw;
- An area on the east side of the mine to the southeast of the No. 1 Stockpile;
- Areas in the southeast corner of the mine, around the reclaimed Burro Mountain Tailings; and
- Areas on the west side of the mine in Deadman Canyon.

Id. FOF ¶ 125 & COL ¶¶ 46-49.

The Commission made other determinations in the *Tyrone* proceeding that are highly relevant to this rule making proceeding. These include but are not limited to the Commission’s determinations that:

- The Commission’s Regulations place the burden on the discharger to demonstrate that a discharge will not result in exceedances above standards at a place of withdrawal, *id.* COL ¶¶ 10,11;
- A “place of withdrawal of water is not limited to a place on the ground, but extends into the aquifer underlying an area on the ground surface; it need not be a well,” *id.* COL ¶ 32;
- The planning horizon for future water use is “at least 100 years,” *id.* COL ¶ 25;
- The WQA does not establish a “point of compliance” regulatory system that would allow contamination above standards downgradient of a source, *id.* COL ¶¶ 27, 28;
- “If it is not technically feasible for water quality standards to be met underneath the Tyrone Mine, the appropriate remedy for Tyrone is to seek alternative abatement standards under the Commission Regulations at section 20.6.2.4103.F NMAC,” *id.* COL ¶ 52.

NMED and FMI would have the Commission ignore these factual and legal determinations. However, these determinations are binding on the Commission and must be followed in this proceeding. The doctrine of collateral estoppel or issue preclusion is a bar to re-litigation of the same issues, even in connection with a different claim or cause of action. R. Pierce, Adm. Law Treatise, vol. 2, § 13.4, p. 1145 (2010). According to a leading administrative law treatise, “[c]ourts routinely apply collateral estoppel to issues resolved by [administrative] agencies” with some complexities added because of the agency context. *Id.*; *see also* C. Koch,

West's Fed. Adm. Practice, § 7867, p. 370 (3rd ed. 2001) (the doctrines of collateral estoppel and res judicata are applicable to administrative proceedings when an agency is acting in an adjudicatory capacity).

Collateral estoppel applies to an administrative agency's own prior decisions, as well as to courts reviewing the administrative agency's decisions. *Id.* § 7868, p. 371. Therefore, the Commission must follow its own prior decisions. Furthermore, collateral estoppel applies to factual and legal determinations made by administrative agencies. *Id.* (factual determinations); Adm. Law Treatise, § 13.4 (factual determinations) & 13.5 (legal determinations).

For collateral estoppel to apply, there must be a showing of identity or privity of parties, the prior proceeding must have complied with the standards of due process, and the findings must be supported by substantial evidence. West's Fed. Adm. Practice, § 7867, p. 371. Furthermore, the party against whom preclusion is raised must have had incentive to contest the prior decision, and had a full and fair opportunity to litigate the issue. *Id.* For application to legal determinations, the requirements are loosened and there does not need to be privity of parties, that is, collateral estoppel may be applied to persons who were not parties in the prior proceeding. Adm. Law Treatise, § 13.5, p. 1155 (citing Second Restatement of Judgments).

All elements of collateral estoppel apply to the factual and legal determinations from the *Tyrone* hearing. The parties or privies against whom collateral estoppel would apply were parties in the *Tyrone* proceeding (NMED and Phelps Dodge/FMI); the *Tyrone* proceeding complied with due process, and the Commission's findings were supported by substantial evidence. Also, both NMED and Phelps Dodge/FMI had incentive to contest the prior decision, and both had a full and fair opportunity to litigate the issues.

Furthermore, neither NMED nor FMI attempted in this rulemaking to re-litigate any of the factual or legal determinations made by the Commission in the *Tyrone* proceeding, and therefore the question as to whether these issues may be re-litigated is not even raised. NMED and FMI did not even question the Commission's legal determination that the WQA did not establish a point of compliance system. Rather, NMED took the position that, as a matter of fact, the Proposed Rule did not establish a point of compliance system. As such, *all* factual and legal determinations of the Commission in the *Tyrone* proceeding are binding on the Commission and will be binding on a court in any subsequent appeal.

V. THE PROPOSED RULE VIOLATES THE WATER QUALITY ACT

A. The Proposed Rule Establishes a Point of Compliance System within which Contamination above Standards Is Allowed at Places of Withdrawal

A "point of compliance" regulatory system for ground water establishes a point on the surface, below which ground water quality standards must be met. This point generally extends vertically downward into the subsurface and into the aquifer. Upgradient of this point, water quality standards may be exceeded. Only at the point of compliance, water quality standards must be met. Some form of monitoring is installed at the designated point of compliance. Travers Direct Test., p. 10.

The Proposed Rule requires compliance with water quality standards to be met at designated monitoring wells, and not upgradient of those wells. Furthermore, except for monitoring around the perimeter of open pits, the Proposed Rule does not require monitoring *within* a surface drainage area of a mine site. For new leach stockpiles, waste rock stockpiles and tailings impoundments located *outside* the surface drainage area, compliance is to be determined at a monitoring well located "around and downgradient of the perimeter" of those mine units, including those mine units' "leachate and solution capture and containment systems."

20.6.7.28.B(2) NMAC [NMED]⁴; *see* 20.6.7.21.B(1)(d)(vii), -(b) & -C(2) NMAC [NMED] (standards for waste rock stockpiles must be met at monitor well locations specified in 20.6.7.28 NMAC); 20.6.7.22.A(4)(d)(viii), -(e) NMAC [NMED] (standards for tailings impoundments must be met at monitor well locations specified in 20.6.7.28 NMAC); Brown Test. Tr. vol. 3, p. 628, ll. 2-8, 17-20; p. 918, ll. 15-22 (monitoring not required within surface drainage area during operations); *see also* AGO Statement of Reasons, § IX.E.

The Proposed Rule thus establishes a point of compliance system where standards must be met at monitor wells *outside* the surface drainage area and at some distance downgradient of mines units and their associated capture systems. As stated, for Tyrone, this is an area approximately of 9 square miles, the perimeter of which is close to Tyrone's permit boundary. Blandford Test. Tr. vol. 6, p. 1500, l. 23 to p. 1501, l. 6; Brown Test. Tr. vol. 4, p. 927, ll. 4-9.

While NMED's two witnesses were less than transparent on this issue, and argued strenuously that the Proposed Rule did not establish a point of compliance system, in the end, both effectively conceded the point. AGO Statement of Reasons, §§ IX.S.1.c & IX.S.2.c; *see also* Blandford Test. Tr. vol. 6, p. 1500, l. 23 to p. 1501, l. 6; AGO Ex. 39 (Blandford depiction of area at Tyrone Mine where contamination allowed).

B. The Proposed Rule Violates the WQA on Its Face by Allowing Standards at Places of Withdrawal to Be Exceeded through a Point of Compliance System

Any new or existing copper mine is a place of withdrawal absent a demonstration, based on the criteria developed by the Commission, that a portion or portions of a copper mine is not a place of withdrawal. Olson Rebuttal Test., pp. 5-6; *see* Comm'n Decision, COL ¶ 11, 15-21 (discharger must demonstrate discharge will not exceed standards at place of withdrawal). The Proposed Rule does not require an evaluation or determination of whether ground water beneath

⁴ NMED's Proposed Rule is referred to with the NMAC citation and [NMED] bracketed.

or downgradient of mine facilities is a place of withdrawal for present and reasonably foreseeable future use. Rather, the Proposed Rule allows mining companies to degrade ground water quality, in excess of water quality standards, beneath and downgradient of mine units to a point or points of compliance, regardless of and without consideration of the potential for this ground water to be withdrawn and used now or in the future. Travers Rebuttal Test., p. 2 [AGO Ex. 24]. The Proposed Rule, on its face, violates Section 74-6-5(E)(3) of the WQA by allowing ground water contamination above standards beneath and downgradient of mine units up to a point of compliance at any new or existing mine without a demonstration, based on the criteria developed by the Commission, that the area is not a place of withdrawal. *See* AGO Statement of Reasons, §§ VI.E, IX.B.8, IX.C.

C. **The Proposed Rule Violates the WQA in Fact by Allowing Standards at Places of Withdrawal to Be Exceeded**

There have already been determinations made as to whether portions of the Tyrone, Chino and Cobre Mines are places of withdrawal. The Commission has made a binding determination that “the regional and alluvial aquifers underlying portions of the Tyrone mine site are places of withdrawal of water for present and reasonable foreseeable future use pursuant to Section 74-6-5(E)(3).” Comm’n Decision, COL ¶ 33. The Commission also identified numerous specific locations within the mine site that are places of withdrawal. Comm’n Decision, COL ¶¶ 46-49, FOF ¶ 125. A number of those locations fall within the area FMI expert witness Thomas Blandford and NMED expert witness Adrian Brown identified as where standards may be exceeded at the Tyrone Mine. These locations include, but are not limited to south of the Gettysburg Pit, west of the Gettysburg Pit along the 1C Stockpile, east of the 3B Waste Stockpile, south of the 5A Waste Rock Pile and, the open pits, and areas around the open pits. AGO FOF ¶ 269. The Proposed Rule irrefutably allows contamination above standards at

these established places of withdrawal in violation of the WQA. *See* AGO Statement of Reasons, §§ IX.C.2, IX.E.1 & -2.

At Chino, the Santa Rita Open Pit and the Lampbright Leach System have been determined to be places of withdrawal. At Cobre, the mine site has been determined to be a place of withdrawal. The Proposed Rule allows contamination above standards at the Santa Rita Open Pit, under the Lampbright Leach System, and underneath Cobre, in violation of the WQA. *See* AGO Statement of Reasons, §§ IX.C.3 & -4, IX.E.3.

The Proposed Rules allows contamination above standards at established places of withdrawal without the need to obtain a variance and, as such, violates the WQA.

D. The Proposed Rule's Corrective Action and Abatement Requirements Do Not Protect Places of Withdrawal from Exceeding Standards

Under the Proposed Rule, if implementation of a corrective action plan does not remediate confirmed ground water contamination above standards, NMED “may” require the mine operator to submit an abatement plan for cleanup to standards, but NMED is not required to do so, that is, abatement to standards is not required. Furthermore, exceedances of water quality standards only violate the Proposed Rule if standards are not met at the point of compliance monitoring wells located at some distance outside the mine units and their associated capture systems. Even if standards are exceeded *outside* the point of compliance system, the Proposed Rule does not require abatement of the contamination to water quality standards. Not requiring clean up underneath a pollution source and up to a designated monitoring point, and not requiring clean up beyond the monitoring point does not require abatement of ground water pollution at any place of withdrawal of water for present or foreseeable use and violates Section 74-6-5(E)(3) of the WQA and the Commission’s Abatement Regulations. *Id.*; *see* 20.6.2.4101.A(1) NMAC (a purpose Abatement Regulations (20.6.2.4000 to 20.6.2.4115

NMAC) is to abate pollution of subsurface water so that all ground water of the State with a background concentration of 10,000 mg/L or less TDS is either remediated or protected for use as domestic and agricultural water supply); 20.6.2.4103(B) NMAC (ground water pollution at any place of withdrawal for present or reasonably foreseeable future use, where the TDS concentration is 10,000 mg/L or less, shall be abated to conform to the standards of 20.6.2.3103 NMAC); *see also* AGO Statement of Reasons, § IX.Q.

E. The Proposed Rule Does Not Require Standards to Be Met at Places of Withdrawal during Closure and Post-closure

Aside from the provision expressly exempting open pits from water quality standards during closure, there is nothing in the closure or post-closure requirements in the Proposed Rule as to whether and where standards must be met at the remainder of a mine site. While Mr. Brown argued (without basis) that, under the Proposed Rule, *all* ground water had to meet standards during closure -- even ground water within the open pits, which have the express exemption -- no other expert agreed with this strained interpretation. Ms. Travers believed that the Proposed Rule implied that standards would need to be met at the designated monitoring wells; Mr. Kuipers thought the Proposed Rule was not clear where standards had to be met during closure; and Mr. Skelly and Mr. Blandford believed that standards must only be met at the designated monitoring wells provided for in 20.6.7.28 NMAC and not upgradient of those compliance wells. Even Mr. Skibitski contradicted his fellow witness, and testified that, during closure, standards would be required to be met at the designated monitoring well network and not upgradient of the network. *See* AGO Statement of Reasons, § IX.R.

The fact is that the provisions in the Proposed Rule governing closure and post-closure do not require that standards be met at places of withdrawal and do not require any evaluation whether standards are met at places of withdrawal. *See* 20.6.7.33 NMAC (closure requirements);

20.6.7.34 NMAC (implementation of closure); 20.6.7.35 NMAC (post-closure requirements).

As such, these provisions do not ensure standards are met at places of withdrawal and violate the WQA.

F. Variations Are Required to Exceed Standards and Do Not Pose a Genuine Risk

While the WQA prohibits exceedances of standards at places of withdrawal, it also has a mechanism that allows flexibility for dischargers through the variance process. Through the variance process, a discharger may exceed standards upon a showing that a Commission regulation imposes an “unreasonable burden” upon a lawful activity. The petition for an “individual variance” is subject to a public hearing, and exceedances must be abated within a reasonable time. NMSA 1978, § 74-6-4(H).

Dischargers may also apply for alternative abatement standards, a type of variance, under the Commission’s Regulations if it is technically infeasible to clean up to standards. 20.6.2.4101 to -4115 NMAC. The Commission has already determined that if abatement to standards is not technically feasible, the appropriate remedy under the WQA and Commission Regulations is alternative abatement standards. Comm’n Decision, COL ¶ 52.

FMI argued strenuously that obtaining variances presented too great a “political risk” to its operations and even jeopardized future investment in copper mining in New Mexico. NMED argued that contamination by rule was the substantive equivalent of contamination through variance, and therefore the variance procedure was unnecessary. Neither FMI nor NMED could substantiate these claims under cross-examination.

As to FMI’s claims, first, historical practice shows that obtaining variances does not present a serious risk for FMI. FMI has applied for and obtained two variances. NMED

supported those variance requests, with conditions, and FMI was not opposed in its requests by citizen or environmental groups. NMED Exs. 22-25.

Second, FMI agreed to petition for variances for new and existing operations that resulted in exceedances of standards in its December 2010 Tyrone Settlement Agreement with NMED. Tyrone's voluntary agreement to obtain variances under the same circumstances at those proposed in the Joint Proposal demonstrates conclusively that FMI does not believe obtaining variances presents an unacceptable risk.

Third, FMI's principal witness on this issue, John Brack, manager of FMI New Mexico operations, was not credible. Mr. Brack had no experience with the variance process in New Mexico and, initially, did not even know how many variances FMI had applied for and obtained. AGO FOF, ¶ 400. Mr. Brack claimed:

Regulating through variances and depending on receiving them, when they are subject to *the whims of ever changing administrations that can be and often are highly influenced by outside entities*, are not an effective way to provide certainty and foster long term investment to occur.

Brack Direct Test., pp. 19-20 (emphasis added). Mr. Brack admitted under cross-examination that "changing administrations" is a lawful process of electing a new governor in New Mexico every four years and that the "influence of outside entities" through public hearing process necessary for a variance is also a legitimate legal process. AGO FOF ¶¶ 398, 399.

Furthermore, Mr. Brack's claim that being required to obtain variances would deter investment in New Mexico is simply disingenuous. As FMI's 2012 Form 10-K shows, FMI has *no* plans for additional investment in FMI's New Mexico mines in any event. AGO FOF ¶ 405. FMI's Form 10-K also demonstrates that, if the ore is economic to mine, FMI will mine it despite extreme and genuine risks, as is the case with FMI's Indonesian Grasberg Mine, which has been fraught for years with violence, deaths, strikes, and ever-changing government demands

despite contractual obligations otherwise. It is not even clear whether FMI will be able to continue to mine at the Grasberg Mine after 2021 because of changing mining laws and uncertain Indonesian politics, yet FMI's plans are to invest \$7.8 billion over time in that high-risk mine. AGO FOF, ¶¶ 412-15 & n.2.

Mr. Brown claimed that contamination by rule versus contamination by variance is “a distinction without a difference.” Brown Rebuttal Test., pp. 6-7. Like Mr. Brack, Mr. Brown had no personal knowledge of the variance process in New Mexico. Mr. Brown did not know the nature of the operations for which variances were received: he believed the variances related to lining waste rock stockpiles and tailings impoundments, when they were actually related to lining leach stockpiles within open pits. AGO FOF ¶¶ 489, 490, 497.

Indeed, while the two variances related to new leaching operations *within* existing open pits, which were highly contaminated from prior operations, NMED's Proposed Rule proposes to allow pollution in excess of standards in many locations throughout a mine site, including pollution from new waste rock stockpiles and tailing impoundments *outside* open pit areas where ground water may not be polluted. Olson Test. Tr. vol. 8, p. 2017, ll. 13-23. This is a distinction with obvious and significant differences. Moreover, the Commission placed conditions to protect ground water in the variances that are not required in the Proposed Rule. These conditions include monitoring for ground water contamination and requiring abatement upon closure. *Id.* p. 2018, l. 5 to p. 2021, l. 6; *see also* NMED Exs. 22-25.

Finally, no party opposing the Proposed Rule opposed the continuation of copper mining in New Mexico, and all recognized the need for FMI to obtain variances under certain circumstances. Obtaining variances does not put at risk New Mexico copper mining.

Claimed problems with variances aside, the WQA in any event requires the public variance process prior to exceeding standards at a place of withdrawal. This is the mechanism the Legislature built into the WQA that both protects ground water and provides flexibility for economic development. It is the statutory mechanism FMI must follow to exceed standards.

G. There Is No Easy Fix to the Proposed Rule

There is no simple way to “fix” the Proposed Rule so that it complies with the WQA by, for example, requiring a place of withdrawal determination. The Proposed Rule’s provisions are interdependent and, as a whole, assume that mines sites are not places of withdrawal, and therefore allow a point of compliance system for monitoring, reduce or eliminate protections for ground water within a surface drainage area, allow for technologies that will result in contamination above standards outside a surface drainage area, do not set forth the circumstances under which a variance or alternative abatement standards must be obtained, and do not set forth where standards must be met upon closure. Without specific guidance in rule, especially with respect to which technologies to protect ground water must be employed under what circumstances, there is no assurance that places withdrawal will be protected, and no certainty – as FMI wants – as to what copper companies are required to do. The changes to the draft copper mine rule that resulted in NMED’s Proposed Rule – that is, NMED’s adoption of FMI’s September 5, 2012 recommendations – were extensive and interrelated. In order for a copper mine rule to protect places of withdrawal, the same level and type of changes are required to make sure that a copper mine rule complies with the WQA.

VI. NMED DID NOT CARRY ITS BURDEN

A. NMED Bears the Burden of Proof

As petitioner, NMED bears the burden of proof in this rulemaking, and must demonstrate by a preponderance of the evidence that the Commission should adopt its Proposed Rule. *Matter of D'Angelo*, 105 N.M. 391, 393, 733 P.2d 360, 362 (1986); *Foster v. Board of Dentistry*, 103 N.M. 776, 777, 714 P.2d 580, 581 (1986). NMED supported its case with two witnesses, neither of whose testimony can be relied upon. As such, NMED did not carry its burden.

B. The Commission May Not Rely on Mr. Skibitski's Testimony Because It Was Not Based on Personal Knowledge, Was Wholly Hearsay, and Was Not Credible

1. Mr. Skibitski's Testimony Was Not Competent

NMED's policy witness was Tom Skibitski. Mr. Skibitski attempted to provide testimony on NMED's discharge permitting process prior to the 2009 amendments to the WQA, compliance with ground water quality standards under sites, the *Tyrone* litigation, the 2009 amendments to the WQA, development of the Proposed Rule, and the objectives of the Proposed Rule. *See generally* Skibitski Direct Test. [NMED NOI]; Skibitski Rebuttal Test. [NMED Rebuttal NOI].

At the time Mr. Skibitski testified, he had been Acting Director of the NMED Resource Protection Bureau for four months. Prior to holding that acting position, Mr. Skibitski had not worked for or managed an NMED regulatory bureau, such as the Ground Water Quality Bureau. He has no formal education in any environmental science such as hydrology or in environmental policy. He conceded readily and many times, that he could provide no technical support for the Proposed Rule. Mr. Skibitski had no direct or personal experience in the NMED discharge permitting process; no experience reviewing, preparing or enforcing ground water discharge

permits; no experience making decisions regarding place of withdrawal or compliance with ground water standards under sites; no experience with the *Tyrone* litigation; no experience with the Tyrone Settlement; no experience regulating discharges to ground water from copper mines; no experience regulating abatement of ground water contamination from copper mines. *See* Skibitski Direct Test., pp. 1-2; Skibitski Resume [NMED Ex. 1]; Skibitski Test. Tr. vol. 2, p. 261, ll. 5-15; p. 262, ll. 8-16; p. 262, l. 23 to p. 263, l. 1; p. 294, ll. 12-16; p. 362, ll. 24-25; p. 369, ll. 115 to p. 372, l. 24; p. 378, ll. 11-14.

While Mr. Skibitski was the NMED point person on policy for the Proposed Rule, he did not participate in nor was he familiar with development of the Proposed Rule. *E.g., id.* p. 340, ll. 9-14 (did not know whether New Mexico Copper participated in CRAC or its committees); *id.* p. 352, l. 24 to p. 353, l. 4 (did not know whether NMED technical staff approved NMED's August 17, 2012 draft rule); *id.* p. 354, ll. 22-24 (did not know that FMI had submitted its comments on the August 17, 2012 draft rule); *id.* p. 355, ll. 21-23 (did not know whether NMED technical staff approved a September 7, 2012 NMED internal draft); *id.* p. 355, l. 24 to p. 356, l. 3 (did not know whether the September 7, 2012 NMED internal draft adopted FMI's September 5, 2012 comments); *id.* p. 374, ll. 2-9 (did not know which NMED technical staff (aside from Mr. Kurt Vollbrecht) had involvement in developing the Proposed Rule).

After Mr. Skibitski's general lack of experience and qualifications had been made evident during cross-examination, he was asked:

Q. Okay. And is there a particular personal experience that you have that you're asking the Commission to consider when it decides whether or not to adopt this rule?

A. No.

Skibitski Test. Tr. vol. 2, p. 372, ll. 20-24.

As demonstrated from the above, Mr. Skibitski's testimony was not based on personal or direct knowledge. Mr. Skibitski's testimony was based on what others had told him. *See also* Skibitski Test. Tr. vol. 2, p. 263, l. 2 to p. 264, l. 1.

With no personal knowledge, Mr. Skibitski was not competent to testify. While the Rules of Evidence do not strictly apply to this proceeding, they "will be looked to for guidance." Procedural Order, § 401.A. Under the Rules of Evidence, a witness is not competent to "testify to a matter unless evidence is introduced sufficient to support a finding that the witness has personal knowledge of the matter." NMRA Rule 11-602. There was no evidence that Mr. Skibitski had any personal knowledge of anything he testified about. For this reason, he was not competent to testify, and the Commission should not rely upon his testimony. *Accord Chavez v. Employment Sec. Comm'n*, 98 N.M. 462, 463, 649 P.2d 1375, 1376 (1982) ("legal residuum rule" requires a residuum of legally competent evidence to support an administrative determination when a substantial right at stake); Guidelines for WQCC Regulations Hearings, § 402.B; (hearing officer may exclude incompetent evidence); Procedural Order, § 402.B (same).

2. Mr. Skibitski's Testimony Was Wholly Hearsay

Furthermore, Mr. Skibitski's testimony was wholly "hearsay." Hearsay testimony is a statement made by someone other than the declarant (in this case, Mr. Skibitski) offered into evidence to prove the truth of the matter asserted. NMRA Rule 11-801.C. Hearsay is not admissible evidence in court proceedings. *Id.*

Mr. Skibitski had no personal knowledge of any of the subjects upon which he testified, and obtained his "knowledge" from others. However, he did not identify the individuals who gave him information. These persons, whoever they might be, did not give the Commission their

information under oath, and were not subject to cross-examination. There is no indicia of reliability for the source or content of Mr. Skibitski's information.⁵

While hearsay is admissible in administrative proceedings, Mr. Skibitski's hearsay testimony was not reliable, as evidenced by the difficulty he had during cross-examination understanding and answering the questions, his many inaccurate and incorrect assertions, his near complete lack of knowledge on the subject matters to which he testified, and the internal inconsistency of his own testimony. *See* AGO Statement of Reasons, § IX.S.2. Mr. Skibitski's hearsay testimony, therefore, is not reliable, and should not be relied upon to support NMED's Proposed Rule. *Accord Chavez*, 98 N.M. at 463, 649 P.2d at 1376 ("legal residuum rule" requires a residuum of legally admissible evidence to support an administrative determination when a substantial right at stake).

3. Mr. Skibitski Was Not Credible

Finally, Mr. Skibitski's testimony lacked any credibility. Mr. Skibitski did not understand and could not articulate the "place of withdrawal" concept, testifying at one point standards could be exceeded at places of withdrawal and testifying at others, they could not. He did not understand that NMED required FMI to seek variances at the Tyrone and Chino mines because NMED considered those locations places of withdrawal. Mr. Skibitski denied the Proposed Rule established a point of compliance system, but in the end admitted that it did. He misrepresented NMED's discharge permit practice over time, alleging that NMED allowed contamination above standards in its permits. Upon cross-examination, he admitted that no discharge permit had ever allowed contamination above standards, and acknowledged the only

⁵ Whoever Mr. Skibitski obtained his information from, it was not from the sworn testimony of NMED witnesses from the 2003 and 2007 hearings before the Commission, witnesses such as Mr. Olson, Clint Marshall or Mary Ann Menetrey, whose testimony is in evidence in this proceeding. That testimony – which Mr. Skibitski consistently contradicted – was reliable because it was given under oath and subject to cross-examination.

time contamination above standards was allowed was through the two variances granted by the Commission. AGO FOF ¶¶ 432-58.

Mr. Skibitski was not able to articulate the fundamentals of ground water protection under the WQA. The whole of his testimony was demonstrably inaccurate. It was internally inconsistent and rambling. While evidentiary requirements are loosened in administrative proceedings, some bounds should be retained. A state agency's primary (and only) policy witness should be held to some modicum of a standard. Mr. Skibitski had no personal knowledge of the subjects he gave testimony on; his testimony was wholly hearsay; and his testimony was not credible. Mr. Skibitski's testimony should not be relied upon by the Commission to support its decision in this matter.

C. The Commission May Not Rely on Mr. Brown's Testimony Because His Interpretations Are Not Binding and He Was Not Credible

Mr. Brown was NMED's only technical witness in support of the Proposed Rule. He was offered as the only technical expert despite the fact that Mr. Brown was an independent contractor to NMED and, as he conceded, any interpretation of the Proposed Rule did not bind NMED and cannot be relied upon in the future. He was offered as the only technical expert despite the fact that there are NMED technical staff who are familiar with the Proposed Rule. Not making NMED technical staff available to testify is highly unusual, if not unheard of. In fact, in Mr. Olson's many years on the Commission and working for NMED, he knew of no other rulemaking or adjudicatory proceeding before NMED or the Commission in which NMED technical staff did not provide technical testimony.⁶

⁶ It is perhaps not surprising that no NMED technical staff testified in support of the Proposed Rule. NMED's lead technical person on the rule, Mr. Vollbrecht, believed that the same provisions of the Proposed Rule violate the WQA as do the Attorney General and other opponents to the rule. Sept. 7, 2012 email from B. Olson to D. Martin, NMED, Major Issues in 9/7/12 NMED 2nd Internal Discussion Draft [AGO Ex. 8]; Olson Test. Tr. vol. 9, p. 2103, l. 17 to p. 2105, l. 13; p. 2247, ll. 10-15. While there is credible evidence in the record that NMED technical staff

In addition to not being able to rely upon his testimony for future interpretation, Mr. Brown provided testimony on key technical concepts that defied credibility. As already explained, Mr. Brown's testimony that, under the Proposed Rule, *all* ground water must meet standards during closure is contrary to the express language of the Proposed Rule exempting open pits and was disagreed with by every other expert at the hearing, including Mr. Skibitski. *See* Section V.E above.

Furthermore, Mr. Brown could not substantiate his repeated assurances in his testimony that the Proposed Rule protects places of withdrawal during operations. Mr. Brown admitted the Proposed Rule does not specifically require a determination as to whether locations at a mine site are places of withdrawal. He was not even familiar with the criteria developed by the Commission to determine whether a location or aquifer is a place of withdrawal. He had no idea of the locations at the Tyrone Mine site that the Commission had determined were places of withdrawal. He freely admitted he was not aware of any analysis conducted by NMED to determine whether such places at the Tyrone Mine were located within the area where contamination above standards is allowed under the Proposed Rule. There are of course, however, locations within the Tyrone Mine that, according to the Commission, are places of withdrawal where, under the Proposed Rule, contamination above standards is allowed. Mr. Brown had no basis for testifying places of withdrawal are protected under the Proposed Rule. *See* AGO Statement of Reasons, § IX.S.2.b.

Mr. Brown also continued to deny that the Proposed Rule established a point of compliance system – even though it is clear that is exactly what the rule does – until he finally

believe the Proposed Rule violates the WQA, there is no evidence in the record that any NMED technical person supports the Proposed Rule.

effectively acknowledged otherwise during cross-examination. *See* AGO Statement of Reasons, § IX.S.2.c.

Mr. Brown's strong support for liners for leach stockpiles and equally strong opposition for liners for waste rock stockpiles, also, undermines his credibility as an engineer. FMI's expert on liners, Michael Grass, laid "waste" to Mr. Brown's argument when he testified, credibly, that there is no technical difference between the application of liners for leach stockpiles and liners for waste rock stockpiles. Indeed, his liners can hold a Volkswagen. AGO FOF ¶¶ 349, 363; AGO Statement of Reasons, § IX.S.2.e.

And, while Mr. Brown claimed that the contamination allowed under the Rule is no difference in substance that the contamination allowed by variance, he again had no basis for that testimony. Mr. Brown had not been involved with either variance proceeding, and was not aware of the protections required as conditions of those variances which are not part of the Proposed Rule. *See* AGO Statement of Reasons, § IX.S.2.d; Section V.F above.

In sum, Mr. Brown's testimony cannot be relied upon in support of the Proposed Rule. *See* AGO Statement of Reasons, § IX.S.2. With no policy or technical witnesses whose testimony can be relied upon to support a decision, NMED cannot meet its burden to justify adoption of the Proposed Rule.

VII. SUBSTANTIAL EVIDENCE SUPPORTS ADOPTION OF THE JOINT PROPOSAL AND REJECTION OF NMED'S PROPOSED RULE

A. The WQA Requires Prevention of Pollution and Consideration of Best Available Technology

The purpose of the WQA is "to abate and *prevent* water pollution." *Bokum Resources Corp. v. N.M. Water Quality Control Comm'n*, 93 N.M. 546, 555, 603 P.2d 285, 294 (1979) (emphasis added); Comm'n Decision, COL ¶ 1. Section 74-6-4(E) of the WQA authorizes the

Commission to promulgate regulations to “*prevent* or abate water pollution in the state” (Emphasis added.) Similarly, Section 74-6-4(K), requiring the Commission to promulgate regulations for the copper industry, requires the Commission to “specify in regulations the measures to be taken to *prevent* water pollution and to monitor water quality.” (Emphasis added.)

It is no surprise that the WQA requires prevention of pollution. Preventing contamination, rather than allowing it, is a basic principle of environmental regulation. It is a fundamental concept that it is more efficient to prevent contamination than to allow it to occur and to attempt to control it, for example, through a capture system. Travers Test. Tr. vol. 7, p. 1576, ll. 13-20; *accord* Brown Test. Tr. vol. 3, p. 594, ll. 18-21. Once contaminated, ground water can be expensive to clean up, costing millions of dollars; can take decades or hundreds of years to clean up; or may be technically infeasible to clean up. AGO Statement of Reasons, § IX.G. The Commission already knows this to be true, finding that, "Tyrone studies have concluded that acid generation in the leach stockpiles and waste rock piles will continue to occur for 300 years or more." Comm'n Decision, FOF ¶ 28.

NMED's Proposed Rule – which allows widespread contamination in the shallow and deep aquifers throughout copper mine sites and then, according to Mr. Brown, requires some easy, magical cleanup at closure – has no basis in science.

Section 74-6-4(E) provides that:

Regulations may specify a standard of performance for new sources that reflects the *greatest reduction in the concentration of water contaminants* that the commission determines to be achievable through application of the *best available demonstrated control technology*, processes, operating methods or other alternatives, including where practicable a standard permitting *no discharge of pollutants*.

(Emphasis added.) Section 74-6-4(K) provides that in promulgating the copper industry rules the Commission “shall consider” “the best available scientific information,” in addition to other statutory factors.

Reading these sections together, the WQA directs the Commission in promulgating regulations (1) to *prevent*, not allow, water pollution at places of withdrawal and (2) to consider the *best available technology* to eliminate or reduce to the greatest extent possible pollution based on the best scientific information.

B. Ground Water Contamination Can Escape the Area of Hydrologic Containment, the Surface Drainage Area, and the Mine Units’ Capture Systems

NMED and FMI witnesses support the relaxation or elimination of ground water protections within the area of hydrologic containment and surface drainage area and up to the surrounding mine units’ capture systems based on the assumption that the hydrologic containment area, surface drainage area and capture systems will *fully* capture ground water contamination and that contamination will not migrate outside these areas. *See, e.g.,* Brown Test. Tr. vol. 4, p. 551, ll. 15-19.

However, in the fractured rock environments that are often present at mine sites, including those in New Mexico, contaminated ground water can easily escape capture from the surface drainage area and containment systems and escape detection from the monitoring systems. This is particularly true for the monitoring system under the Proposed Rule which, as Mr. Brown testified to, requires only one well for each mine unit. AGO FOF ¶¶ 278-86.

Mr. Travers cited a stark example where ground water contamination below a site, unexpectedly, escaped. Travers PowerPoint, p. 21 [AGO Ex. 45]. Mr. Brown testified that he would “guarantee” a capture system will not be 100% effective. AGO FOF ¶ 301. And, as Mr.

Blandford conceded, contamination from the 1C waste rock stockpile at the Tyrone Mine -- which is outside the surface drainage area and had a capture system -- escaped and contributed to the 3 ½ mile off-site plume down Oak Grove Wash. The failed system from 1C waste rock stockpile is precisely the system proposed to be set up in NMED's Proposed Rule. This real life example from Tyrone unquestionably demonstrates that NMED's Proposed Rule is not adequate to protect against on-site and off-site migration of water pollution. AGO FOF ¶¶ 302-08.

Moreover, it is particularly difficult or virtually impossible to capture contamination in deep aquifers with complex, fractured rock, such as those that exist at the copper mines in New Mexico. Indeed, according to NMED technical staff, contamination in the deep aquifer at Tyrone, at 500 feet, has not been possible to contain. *See* AGO FOF ¶¶ 292-96.

Substantial evidence in the record supports the finding that, if ground water contamination is allowed under mine units as proposed in NMED's Rule, it is likely to escape capture through the containment systems in the Proposed Rule and to escape detection through the monitoring system in the Proposed Rule.

C. **Prevention of Pollution and Best Practice Support Adoption of the Joint Proposal and Rejection of NMED's Proposed Rule**

Substantial evidence in the record supports adoption of the Joint Proposal because it will prevent pollution and represents best practice. Conversely, substantial evidence in the record supports rejection of NMED's Proposed Rule because it will allow widespread pollution and does not represent use of best available technology.

1. **Leach Stockpiles**

The process of leaching ore stockpiles with sulfuric acid to recover copper ore, combined with the leaching caused by precipitation, will result in contamination of ground water above standards. AGO FOF ¶ 336. Leach stockpiles have caused ground water contamination above

standards at the Tyrone, Chino, and Cobre Mines, and contamination that has migrated off-site. *Id.* ¶ 337. While the Proposed Rule requires new leach stockpiles outside the surface drainage area to be synthetically lined, it does not require new leach stockpiles *inside* the surface drainage area to be lined. 20.6.2.21.A(1)(f) NMAC [NMED].

Leaching within the surface drainage area will pollute clean waters or increase contamination in already polluted waters. Contamination from leaching within the surface drainage area also can escape. *See* Section VII.B above. Leach stockpiles, therefore, should be lined to prevent contamination. Synthetic liners provide “excellent ground water protection,” according to Mr. Brown. AGO FOF ¶ 341. According to Ms. Travers and Mr. Kuipers, all leach stockpiles should be lined. *Id.* ¶¶ 339, 340. And, according to Mr. Grass, lining all leach stockpiles is standard industry practice and environmental practice. *Id.* ¶¶ 342, 351, 352. He testified that *all* leach stockpiles are lined presently; he is not aware of any recent leach stockpile that is not lined. *Id.* ¶ 351. According to Mr. Grass,

On my own, [regardless] of regulation, if I were to ever design a new heap leach stockpile in New Mexico, I wouldn’t design it without a liner system. I – as an engineer – it’s not the standard of practice. It’s -- I wouldn’t do it.

Id. ¶ 353. The record supports lining all leach stockpiles as standard industry and environmental practice, and as the best method to prevent ground water pollution.

2. **Waste Rock Stockpiles**

Leaching of metals in waste rock stockpiles through precipitation may result in contamination of ground water above standards. To determine whether waste rock stockpiles may contaminate above standards, waste rock should be first characterized, as required by the Proposed Rule. *See* 20.6.7.21.A NMAC [NMED]. Under the Proposed Rule, however, new waste rock stockpiles inside a surface drainage area do not have to be lined, and even new waste

rock piles outside a surface drainage area that “would” result in exceedances of standards do not have to be lined and are subject only to an interceptor system. 20.6.7.21.B NMAC [NMED].

In Mr. Kuipers’ decades of experience, he is not aware of any mine designed with interceptor wells as part of the original design for a waste rock stockpile. Inceptor systems are used only after contamination has occurred and the mine is required to capture that contamination. As he put it:

... as a part of a design feature, I've never seen in my career a waste rock pile that was designed to actually have interceptor wells below the toe as part of a, if you will, design capture system. I've seen many of them put in as mitigation or other measures after pollution has been discovered.

Id. ¶ 358.

Within the last 4 to 5 years, protection of ground water from contamination from waste rock stockpiles has evolved. Mine facilities are now lining new waste rock stockpiles because it is a more effective means of capturing acid generation than trying to capture it “somewhere downstream.” *Id.* ¶ 360; *see also* Travers Direct Test., pp. 15-16; Olson Direct Test., pp. 22-23 (waste rock stockpiles that are likely to contaminate ground water above standards should be lined). Mr. Kuipers identified three mines – the Hollister Mine and Mount Hope molybdenum mine in Nevada and the Black Lumbridge Mine in Idaho – as examples of mines that have lined or intend to line waste rock piles. *Id.* ¶ 360. Indeed, for many of the 50 waste rock stockpiles that have capture systems of which Mr. Kuipers is aware, it is acknowledged that the stockpiles should have been lined to prevent ground water contamination. *Id.* ¶ 359. The trend is to line waste rock stockpiles that will degrade ground water:

The main trend is this: if you recognize you have an issue and you know you're going to be generating leachate from waste rock that's going to be an issue, why not construct a liner and capture efficiently rather than allow it to go into groundwater and then you have to capture a whole bunch of additional water from

upstream, you have dilution that's occurred, and you have a much more difficult time even treating that effluent.

Id. ¶ 361.

As the Commission has found, waste rock stockpiles have contaminated ground water at the FMI mines in New Mexico. *Id.* ¶¶ 110, 115; Comm'n Decision, FOF ¶¶ 25-29, 37. Indeed, the 1C Waste Rock Stockpile at the Tyrone Mine resulted in contamination off-site even though it had a capture system. The capture system did not collect all the contaminated water. AGO FOF ¶¶ 303-06. The Commission recognized that the 1C Waste Rock Stockpile caused pollution in the alluvial and regional aquifers along Oak Grove Draw. Comm'n Decision, FOF ¶ 37. The example of the 1C Waste Rock Stockpile demonstrates that the technology proposed for waste rock stockpiles in the Proposed Rule does not work.

NMED and FMI witnesses testified that installing a synthetic liner for waste rock stockpiles is more difficult technically than for leach stockpiles for various reasons, all of which were effectively rebutted by Mr. Kuipers. *See* AGO FOF ¶¶ 364-65. Most tellingly however was Mr. Grass's testimony on the subject: he testified that "the liner systems are the same, so there's no real difference" between engineering a liner for a leach stockpile and engineering a liner for a waste rock stockpile. *Id.* ¶ 363. Indeed, as to NMED and FMI's argument that waste rocks are larger than leach ore and problematic for that reason: that fact is, geomembrane liners are so strong they can withstand a boulder the size of a "Volkswagen," as Mr. Grass so graphically described it. *Id.* ¶ 366.

Bottom line: new waste rock stockpiles that may result in exceedances of standards, based on material characterization, should be synthetically lined if they are inside or outside the surface drainage area in order to prevent contamination of clean water inside the surface drainage

area, prevent further contamination of polluted water inside the surface drainage area, and prevent migration outside the surface drainage area. AGO FOF ¶ 357.

3. Tailings Impoundments

As the Commission has found, tailings impoundments cause contamination of ground water above standards, and have caused ground water contamination above standards at the Tyrone, Chino, and Cobre Mines. AGO FOF ¶¶ 367-68; Comm'n Decision, FOF ¶¶ 25, 30-32. Nonetheless, the Proposed Rule does not require lining tailings impoundments or other technologies that would prevent contamination, but instead relies upon a capture system that is at substantial risk of not working. 20.6.7.22.A(4) NMAC [NMED].

Feasible and practical technologies to prevent ground water contamination from tailings impoundments exist and are being used. Mr. Kuipers identified three methods: lining tailings impoundments, making “dry stack” tailings, and making “paste” tailings. AGO FOF ¶ 370. Lining tailings impoundments has been the most commonly used method until recently. There are many lined tailings impoundments, including many that are very large, that are being successfully and safely operated throughout the United States and elsewhere in the world. *Id.* ¶ 371. The trend in preventing ground water contamination from tailings is moving to dry tailings. The overwhelming opinion of professional engineers “using the state-of-the-art, rather than state-of-past-practice” technologies is to do away with wet tailings deposits, and use the dry tailings technologies. Dry stack or paste tailings conserve water, do not result in ground water contamination, do not raise the issues liners do, and do not require perpetual maintenance as do dammed wet tailings. *Id.* ¶ 372.

Other mining operations intend to use this technology. Dry stack tailings have been planned for the last five years for use at the Rosemont Copper Mine in Arizona, a new, very

large mine, similar in size to the copper mines in New Mexico. The molybdenum mine in Questa, also a very large mine, has decided to convert to paste tailings even though its existing tailings impoundment has another 15 years of capacity. *Id.* ¶ 373.

And, there is a copper mine example in New Mexico: New Mexico Copper is the only copper mine proposing new facilities in New Mexico. New Mexico Copper participated as a member of the CRAC and its technical subcommittee. New Mexico Copper proposes a liner system for its 530 acre tailing impoundment as a feasible and economic means to prevent water pollution while conducting copper mining activities. *Id.* ¶¶ 374-77.

NMED and FMI witnesses testified that installing a synthetic liner for tailings impoundments is more difficult technically than for leach stockpiles for reasons that include that liners leak, pore water pressure on the liner increases because there is no drainage creating instability, and collection of drainage fluid that has been treated will result. *Id.* ¶ 380. However, none of these excuses not to line a tailings impoundment is technically sound.

First, potential leakage is an issue that can be addressed for tailings impoundments, as it is for leach stockpiles. *Id.* ¶ 381. Second, drainage is a potential that can and has been addressed. Whether tailings are lined or unlined, they must be drained. Drainage systems at tailings have been improved over time. If drainage is an issue, there are mitigation measures that can be put into place. Drainage “does not represent a real technical issue of substance to installing lined tailings impoundments.” *Id.* ¶ 382. Indeed, as Mr. Grass explained for drainage systems for leach stockpiles, a liner system is designed to prevent clogging of the drain system. *Id.* ¶ 348. Third, a goal is to collect the seepage from the tailings. As Mr. Kuipers explained, this concentrated seepage in small volumes can be effectively treated, and is easier to capture and treat than the larger volumes of ground water from unlined tailings. *Id.* ¶ 383. As with NMED

and FMI's claims that lining waste rock piles is not feasible, their similar claim as to tailings impoundments is not supported by scientific fact in the record.

4. Monitoring Network

Finally, the Proposed Rule's monitoring network requirements are not based on sound practice and represent a reduction in current NMED monitoring requirements. The Proposed Rule does not require monitoring within a surface drainage area (except at the perimeter of a pit) and requires only *one* monitoring well for any one leach stockpile, waste rock stockpile or tailings impoundment outside the surface drainage area. 20.6.7.28.B(2) NMAC [NMED]; AGO FOF ¶ 217. And even then, the one monitor well is to be located downgradient of the mine unit's capture system. 20.6.7.28.B(2) NMAC [NMED]

Presently, for example, there are at least 15 monitor wells within the Tyrone Mine surface drainage area, Blandford Test. Tr. vol. 6, p. 1503, ll. 14-15, that would not necessarily be required under NMED's Proposed Rule. Furthermore, there is no current NMED practice to locate monitor wells beyond the capture system of a mine unit. "Determining appropriate locations for monitoring wells is critical to detecting and addressing an exceedance or trend towards exceedance(s) of ground water quality standards." Travers Direct Test., p. 12. Substantial evidences supports the conclusion that a sufficient number of monitor wells to detect contamination as early as possible – not after migration of contamination has occurred – should be required.

VIII. THE COMMISSION DOES NOT HAVE AUTHORITY TO PROMULGATE THE PROPOSED RULE

The Water Quality Act protects *all ground water* with a present or future use. By its terms, the Water Quality Act does not authorize water pollution underneath sources of pollution; it does not authorize pollution upgradient of a point of compliance system; it does not exempt

copper mining companies from water quality standards; it does not authorize pollution of shallow and regional aquifers under 9 square miles of a copper mine.

The State of New Mexico, through the Commission and its constituent agencies of NMED and the Oil Conservation Commission, has never interpreted the Water Quality Act or Commission Regulations to authorize contamination above standards underneath sources of pollution absent a showing the location was not a place of withdrawal. AGO Statement of Reasons, § II.D. NMED proposes regulations that authorize contamination above standards under a source of pollution at places of withdrawal.

The Commission is a creature of statute, and may not exceed its authority under statute. *In re Proposed Revocation of Food and Drink Purveyor's Permit for House of Pancakes*, 102 N.M. 63, 66, 691 P.2d 63, 67 (Ct. App. 1984). The Commission does not have the authority under the Water Quality to exempt copper mines from meeting water quality standards. Only the Legislature has that authority. NMED and FMI are free to lobby the Legislature for a copper mining exemption under the Water Quality Act. The Commission, however, does not have the authority to sanction such water pollution through regulation.

Conclusion

For the reasons set forth herein and in the Attorney General's Statement of Reasons, and based on the record in this matter, the Attorney General respectfully requests the Commission to adopt the Joint Proposal as the Copper Mine Rule and to reject NMED's Proposed Rule.

Respectfully submitted,

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