

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.

**ATTORNEY GENERAL'S RESPONSE  
TO FMI'S BRIEF ON THE COMMISSION'S AUTHORITY**

**Preliminary Statement**

There are a number of points made in the Freeport McMoRan mining companies' ("FMI") lengthy discussion on the authority of the Water Quality Control Commission ("Commission") to promulgate rules that are not subject to disagreement:

- That the New Mexico legislature passed amendments to the Water Quality Act ("WQA") in 2009 requiring the Commission to promulgate rules for the copper mine industry that allow the Commission to specify methods to control pollution;
- That the Commission has authority to promulgate rules that implicate policy as long as the rules do not exceed the Commission's statutory authority;
- That the Court of Appeals directed the Commission to adopt "general factors or policies", through rule or adjudication, to guide the determination of what constitutes a "place of withdrawal of water for present or reasonably foreseeable future use" under the WQA.

The disagreement is whether the Copper Mine Rule, as proposed by the New Mexico Environment Department ("NMED"), would exceed the Commission's authority under the WQA if promulgated. By allowing contamination of ground water about water quality standards under "places of withdrawal" and by establishing "points of compliance" away from the contamination sources to determine compliance with standards, the proposed Copper Mine Rule runs afoul of the WQA, and in excess of the Commission's authority to promulgate. *Rivas v. Bd. of Cosmetologists*, 101 N.M. 592, 593, 686 P.2d 934, 935 (1984) ("administrative agency has no power to create a rule or regulation that is not in harmony with its statutory authority"). Because

the proposed rule exceeds the Commission's authority under statute, the Commission should remand the rule back to NMED to develop a rule that complies with the WQA.

### **Argument**

#### **I. THE COMMISSION DOES NOT HAVE AUTHORITY UNDER STATUTE TO PROMULGATE THE PROPOSED COPPER MINE RULE**

The Attorney General details in his Motion to Remand the reasons why the proposed Copper Mine Rule violates the WQA. *See* AG Mot. to Remand, pp. 13-18. As well, NMED's expert contractor and Ground Water Quality Bureau technical staff identified numerous provisions adopted in the proposed Copper Mine Rule that violate the WQA. *See* Sept. 7, 2012 memo from B. Olson to D. Martin, NMED [Ex. A]. In brief, the proposed rule violates the WQA because it allows water quality standards to be exceeded at "places of withdrawal of water for present and reasonably foreseeable future use," in contravention of Section 74-6-5(E)(3) of the WQA. As a necessary corollary to allowing ground water contamination above standards under sources, the proposed rule establishes "points of compliance," away from the sources of contamination, where compliance with standards is determined, also in contravention of the WQA.

The proposed Copper Mine Rule gives *blanket exemption* to pollute ground water above standards under open pits, leach piles, waste rock piles and tailing impoundments at existing and future copper mine sites. However, the determination under the WQA as to whether a particular site is a "place of withdrawal" must necessarily be a *site-specific determination*, as the Court of Appeals indicated in *Phelps Dodge Tyrone, Inc. v. N.M. Water Quality Control Comm'n*, 2006-NMCA-115, ¶¶ 35-36, 140 N.M. 464, 473, 143 P.3d 502, 511. There, the court directed the Commission to "create some general factors or policies to guide its determination" as to what

constitutes a place of withdrawal. *Id.* ¶ 35, 140 N.M. at 473, 143 P.3d at 511. “The Commission may adopt appropriate factors to guide its discretion, *apply them*, and conclude that NMED has established reasonable [permit] conditions that are based on a reasonable place, or reasonable places, of withdrawal.” *Id.* ¶ 37, 140 N.M. at 474, 143 P.3d at 512 (emphasis added). The court indicated, for example, that the “unique geology and hydrology of the area and the particular site” may be appropriate factors. *Id.* ¶ 36, 140 N.M. at 473, 143 P.3d at 511. Whether a particular *existing* site is a place of withdrawal cannot be made without a site-specific determination applying the factors or criteria set forth by the Commission. And, plainly, for *future* sites, no such site-specific determination can be made through rule. As the Attorney General pointed out in his Motion to Remand, the WQA does not allow blanket exemptions from standards (excepting for the “reasonable operation of irrigation or flood control facilities”). Exemption from standards may only be obtained through individual variances granted by the Commission, not by a rule that applies to all existing and future sites. NMSA 1978, 74-6-4.G.

## **II. NMED’S RECENT INTERPRETATION OF THE WQA IS NOT ENTITLED TO DEFERENCE**

For over 35 years, NMED has determined that the WQA and Commission regulations protect ground water with total dissolved solids (“TDS”) of 10,000 milligrams per liter (“mg/l”) or less, as “places of withdrawal,” unless shown otherwise. *See* 20.6.2.3101.A NMAC (purpose of Commission regulations is “to protect all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply”); Comm’n Decision, FOF ¶¶ 60-62 (Feb. 9, 2007) [attached to AG Mot. to Remand as Ex. B]. Over the course of more than 30 years of permitting FMI’s Tyrone mine site, for example, NMED had determined that the site is a “place of

withdrawal” under which ground water quality may not exceed standards. *See* Testimony of M.A. Menetrey, pp. 3, 6-17 [Ex. B]. The Commission, in 2004 and in 2007, made the same determination. *See* First Comm’n Decision, ¶ 29 [Ex. A to AG Mot. To Remand] & Comm’n Decision, COL ¶¶ 26, 29-57.

NMED’s newly-minted interpretation of the WQA, allowing for water quality standards to be exceeded under copper mine sites and for determining compliance at points of compliance, is not entitled to deference. Courts review *de novo* the legal question of whether an administrative agency misinterpreted or misapplied its statutory or administrative governing provisions. *Amrep Southwest Inc. v. Sandoval Co. Assessor*, 2012-NMCA-82, ¶ 7, \_\_\_ N.M. \_\_\_, \_\_\_, 284 P.3d 1118, 1120 (citing *Lobato v. State Env’t Dep’t*, 2012-NMSC-2, ¶ 6, \_\_\_ N.M. \_\_\_, 267 P.3d 65); *see also Kirkpatrick v. Bd. of Co. Comm’rs*, 2009-NMCA-110, ¶ 20, 147 N.M. 127, 132, 217 P.3d 613, 618 (declining to give agency’s interpretation of its own ordinance deference because interpretation was unreasonable and unlawful); *Pickett Ranch LLC v. Curry*, 2006-NMCA-82, ¶ 5, 140 N.M. 49, 53, 139 P.3d 209, 213 (courts review *de novo* questions of statutory interpretation).

FMI argues that the Commission is not bound by its prior determinations as long as “a reasoned explanation is provided” for its change. FMI Brief, p. 10. This argument, however, misses the point: the proposed Copper Mine Rule violates the WQA, and the Commission may not violate the WQA by rule.

### **III. THE PROPOSED RULE DOES NOT SET FORTH FACTORS TO GUIDE THE DETERMINATION OF WHAT CONSTITUTES A PLACE OF WITHDRAWAL**

The Court of Appeals directed the Commission to “create some general factors or policies to guide its determination” as to what constitutes a place of withdrawal. *Tyrone*, ¶ 35,

140 N.M. at 473, 143 P.3d at 511. The court offered “no opinion” as whether this should be done “by way of rulemaking or by simply deciding the factors as part of this specific case, or both.” *Id.*

Upon remand, after a 24 day hearing, the Commission complied with the court’s direction and established the factors to guide the determination as to what constitutes a place of withdrawal under the WQA: 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. Comm’n Decision, COL ¶¶ 15-21. The Commission meticulously considered and applied each of the factors to the Tyrone site, in 157 findings of fact, again in compliance with the court’s direction, and arrived at the conclusion that portions of the Tyrone site are places of withdrawal. *Id.* at FOF ¶¶ 142-298, COL ¶¶ 15-21, 33-51.

In contrast, the proposed Copper Mine Rule disregards the factors established by the Commission, and does not establish “general factors or policies” to guide the determination as to what constitutes a place of withdrawal under the WQA. Instead, contrary to the appellate court’s direction, the proposed rule assumes that existing and future copper mine sites are *not* places of withdrawal, and allows exceedances of water quality standards at mine sites. The proposed rule’s blanket determination that standards may be exceeded under significant portions of copper mine sites, now and into the future, is the same type of overly broad conclusion that the Court of Appeals rejected in *Tyrone*. *Tyrone*, ¶¶ 32, 33, 140 N.M. at 472, 143 P.3d at 510. The proposed rule does not follow the direction given by the court in *Tyrone*.

**IV. A HEARING ON THE PROPOSED COPPER MINE RULE IS NOT NEEDED TO DETERMINE THAT THE RULE VIOLATES THE WQA**

FMI argues that remanding NMED's rulemaking petition prior to a hearing is premature because the determination whether the rule violates the WQA is a matter that can only be ascertained through the presentation of evidence and testimony. FMI Brief, pp. 2, 16. This claim is incorrect. The proposed Copper Mine Rule on its face violates the WQA, as detailed in the Attorney General's Motion to Remand, pp. 13-18, and as explained by NMED's expert contractor and Ground Water Quality Bureau technical staff to NMED senior management. Pollution above standards is permitted under the open pits, leach piles, waste rock piles and tailing impoundments. Points of compliance outside the source areas determine compliance with standards. The proposed rule, on its face, violates the WQA, and evidence does not need to be taken to determine that the proposed rule is "not in harmony" with the WQA.

**V. HOLDING A HEARING ON A RULE SO PERVASIVELY DEFECTIVE WOULD BE A POOR USE OF LIMITED COMMISSION RESOURCES**

FMI argues that remanding NMED's rulemaking petition prior to a hearing is premature because any defects with the proposed rule can be cured by Commission changes as a result of the hearing process. FMI Brief, pp. 16-17. It is correct that the Commission may modify the proposed Copper Mine Rule to cure defects, based on the evidence adduced at hearing, so long as the modifications are a "logical outgrowth" of the rule noticed to the public.

However, because the proposed rule so pervasively violates the WQA, and many provisions are dependent on and related to others, it would not represent a sound use of the Commission's and parties' resources to hold a hearing on the rule, as proposed. The Commission has full discretion under the WQA to determine whether or not hold a public

hearing on NMED's petition. NMSA 1978, § 74-6-6.B. The amount of resources and expense for the Commission to prepare for a complex hearing such as this one, to sit through and consider the testimony and evidence presented at the hearing, to consider the post-hearing briefs, and to deliberate is enormous. The Commission's time is not wisely spent on a rule that is violative of the authority under which the Commission operates, even though the Commission has the authority to dig through all the evidence and splice through the rule to cure all its defects. The Commission's limited time is better spent considering a rule that comports with the provisions of the WQA.

## **VI. NMED RETAINS ITS AUTHORITY TO CONDITION COPPER MINE PERMITS**

FMI argues that the 2009 legislation requiring the Commission to promulgate rules for the copper industry represents a "paradigm shift" of power between the Commission and NMED, and that the amendments "substantially limit the Department's ability to impose permit conditions that specify the methods to prevent or abate water pollution and to monitor . . . ." FMI Brief, pp. 2, 4. This interpretation of the 2009 amendments is not correct. NMED retains its full authority under the WQA to impose reasonable permit conditions in copper mine permits.

### **A. WQA Prior to 2009 Amendments**

The Commission's rulemaking authority in the WQA is found in Sections 74-6-4 and 74-6-5. Prior to the 2009 amendments, the WQA provided:

Regulations shall not specify the method to be used to prevent or abate water pollution but 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 . . . .

NMSA 1978, § 74-6-4(D) (1993). The WQA also provided:

By regulation, the commission may impose reasonable conditions upon permits requiring permittees to:

- (1) install, use and maintain effluent monitoring devices;
- (2) sample effluents and receiving waters for any known or suspected water contaminants in accordance with methods and at locations and intervals as may be prescribed by the commission;
- (3) establish and maintain records of the nature and amounts of effluents and the performance of effluent control devices;
- (4) provide any other information relating to the discharge or direct or indirect release of water contaminants; and
- (5) notify a constituent agency of the introduction of new water contaminants from a new source and of a substantial change in volume or character of water contaminants being introduced from sources in existence at the time of the issuance of the permit.

NMSA 1978, § 74-6-5(I) (1993).

With respect to permit conditions imposed by constituent agencies, the WQA provided that:

The commission shall by regulation set the dates upon which application for permits shall be filed and designate the time periods within which a constituent agency shall . . . grant the permit, *grant the permit subject to conditions* or deny the permit.

NMSA 1978, § 74-6-5(D) (1993) (emphasis added); *see also* NMSA 1978, § 74-6-5(M) (1993) (constituent agency may terminate or modify a permit or “grant[] a permit subject to condition”).

#### **B. 2004 Tyrone Decision**

After the Commission issued its first decision on Phelps Dodge Tyrone, Inc.’s (“Tyrone”) petition for review, on June 10, 2004, Tyrone appealed to the Court of Appeals.<sup>1</sup> In addition to challenging the Commission’s determination that the Tyrone mine site was a “place of withdrawal,” Tyrone challenged the Commission’s affirmance of conditions in the Tyrone permit requiring Tyrone to regrade its leach piles and waste rock piles no steeper than a 3:1 slope and to

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<sup>1</sup> The background of the Tyrone litigation before the Commission is set forth in more detail in the Attorney General’s Motion to Remand, pp. 8-10.

cover the piles with 3 feet of alluvium. *Id.* ¶ 2, 140 N.M. at 466, 143 P.3d at 504. Tyrone argued that NMED did not have the authority under the WQA to require these permit conditions. Tyrone relied on the language in the WQA stating that the Commission’s “[r]egulations shall not specify the method to be used to prevent or abate water pollution . . . .” NMSA 1978, § 74-6-4(D) (1993). Tyrone also argued that NMED was limited in the types of permit conditions it could require to those specified in Section 74-6-5(J), cited above, that lists conditions relating to monitoring, sampling, and reporting of water quality.

The Court of Appeals rejected Tyrone’s arguments, as had the Commission. It held that (1) Section 74-6-4(D) did not limit NMED’s ability in a permit to specify methods to prevent or abate water pollution, but limited the Commission’s authority with respect to regulations, and (2) Section 74-6-5(J) did not limit NMED’s ability to impose permit conditions to those listed in that section. *Tyrone*, ¶¶ 16-24, 140 N.M. at 469-70, 143 P.3d at 507-08. The court affirmed NMED’s authority under the WQA “to impose reasonable permit conditions”. *Id.* ¶ 24, 140 N.M. at 469, 143 P.3d at 507. “In connection with its authority to grant a permit, the plain language of Section 74-6-5(D) allows a constituent agency to attach conditions to a permit.” *Tyrone*, ¶ 17, 140 N.M. at 469, 143 P.3d at 507.

### **C. 2009 Amendments to WQA**

In 2009, the legislature deleted the limitation on the Commission’s authority in Section 74-6-4(D) prohibiting the Commission from promulgating regulations that specified a “method used to prevent or abate water pollution.” *See* NMSA 1978, § 74-6-4(E) (2009).<sup>2</sup> Rather, the

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<sup>2</sup> A new Subsection C to Section 74-6-4 was added in 2009, and the then-Section 74-6-4(D) became Section 74-6-4(E). *See* History, 2009 amendment, to NMSA 1978, § 74-6-4. New Subsection C provides that the Commission: “shall not adopt or promulgate a standard or regulation that exceeds a grant of rulemaking authority listed in the statutory section of the Water Quality Act authorizing the standard or regulation . . . .”

legislature authorized the Commission to promulgate “in regulations the measures to be taken to prevent water pollution and to monitor water quality,” thereby expanding the Commission’s scope of authority to promulgate regulations specifying specific measures or methods in permits to prevent water pollution. NMSA 1978, § 74-6-4(K) (2009). The legislature further authorized the Commission to adopt regulations for particular industries, and required the Commission to adopt regulations for the dairy and copper industries. *Id.*<sup>3</sup>

With respect to constituent agencies’ authority to condition permits, *the legislature left intact* the language relied upon by the Court of Appeals in its holding that constituent agencies have authority to impose reasonable permit conditions, and *expressly authorized* constituent agencies to impose permit conditions above and beyond those specified in any industry-specific regulations passed by the Commission. Section 74-6-5(D) now provides in full:

The commission shall by regulation set the dates upon which applications for permits shall be filed and designate the time periods within which the constituent agency shall, after the filing of an administratively complete application for a permit, *either grant the permit, grant the permit subject to conditions or deny the permit.* The constituent agency has the burden of showing that each condition is reasonable and necessary to ensure compliance with the Water Quality Act and applicable regulations, considering site-specific conditions. *After regulations have been adopted for a particular industry, permits for facilities in that industry shall be subject to conditions contained in the regulations. Additional conditions on a final permit may be imposed* if the applicant is provided with an opportunity to review and provide comments in writing on the draft permit conditions and to

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<sup>3</sup> The remainder of new Subsection K to Section 74-6-4 provides:

The commission shall consider, in addition to the factors listed in Subsection E of this section, the best available scientific information. The regulations may include variations in requirements based on site-specific factors, such as depth and distance to ground water and geological and hydrological conditions. The constituent agency shall establish an advisory committee composed of persons with knowledge and expertise particular to the industry category and other interested stakeholders to advise the constituent agency on appropriate regulations to be proposed for adoption by the commission. The regulations shall be developed and adopted in accordance with a schedule approved by the commission. The schedule shall incorporate an opportunity for public input and stakeholder negotiations . . . .

receive a written explanation of the reasons for the conditions from the constituent agency.

NMSA 1978, § 74-6-5(D) (2009) (emphasis added). Constituent agencies, therefore, retain their authority to impose reasonable conditions in permits and are specifically allowed to do so in copper permits. The language added in 2009 imposing on NMED the burden of showing that additional conditions are reasonable does not add any new requirements on the agency. It has always been the rule that NMED has the burden of proof for imposing permit conditions. *See* 20.1.4.400.A(1) NMAC (“Division has the burden of proof for a challenged condition of a permit or license which the Department has proposed”).

### **Conclusion**

For the reasons set forth herein and in the Attorney General’s Motion to Remand, the Commission should remand NMED’s Copper Mine Rule Petition to NMED with direction to develop a rule, in conjunction with the Copper Rule Advisory Committee, that complies with the WQA.

Respectfully submitted,

GARY KING  
ATTORNEY GENERAL OF NEW MEXICO



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Tannis L. Fox  
Assistant Attorney General  
Water, Environmental and Utilities Division  
Office of the New Mexico Attorney General  
P.O. Box 1508  
Santa Fe, New Mexico 87504  
T 505.827.6695 F 505.827.4444  
[tfox@nmag.gov](mailto:tfox@nmag.gov)

Counsel for the Attorney General

Certificate of Service

I certify that the following were served with the foregoing pleading by email on January 11, 2013:

Andrew Knight  
Assistant General Counsel  
Office of General Counsel  
New Mexico Environment Department  
P.O. Box 5469  
Santa Fe, New Mexico 87502-5469

Dalva Moellenberg  
Anthony J. Trujillo  
Gallagher and Kennedy, P.A.  
1233 Paseo de Peralta  
Santa Fe, New Mexico 87501-2758

Bruce Frederick  
Staff Attorney  
New Mexico Environmental Law Center  
1405 Luisa Street, #5  
Santa Fe, New Mexico 87505-4074

Tracy Hughes  
1836 Cerros Colorados  
Santa Fe, New Mexico 87501

Louis W. Rose  
Montgomery & Andrews, P.A.  
P.O. Box 2307  
Santa Fe, New Mexico 87504-2307

John J. Indall  
Comeau, Maldegen, Templeman & Indall LLP  
P.O. Box 669  
Santa Fe, New Mexico 87504-0669

TCL FOX

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Tannis L. Fox

**Bill Olson**

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**From:** Bill Olson <billjeanie.olson@gmail.com>  
**Sent:** Friday, September 07, 2012 8:32 PM  
**To:** 'Martin, David, NMENV'; Flynn, Ryan, NMENV; 'Davis, Jim, NMENV'  
**Cc:** 'Schoeppner, Jerry, NMENV'; 'Vollbrecht, Kurt, NMENV'; 'Marcoline, Joseph, NMENV';  
Braswell, Misty, NMENV  
**Subject:** Copper Mine Rule - 2nd NMED Internal Discussion Draft  
**Attachments:** Copper Rule-NMED #2 Internal Discussion Draft 09072012.doc; Copper Rule - FA -  
CLEAN DISCUSSION DRAFT 08172012.doc; NMED 2nd Draft Copper Rule - Major Issues  
09072012.docx

Attached you will find the 2<sup>nd</sup> NMED Internal Discussion Draft of the copper mine rule that incorporates the comments that we received on Wednesday of this week. Edits are denoted in track changes. Most of the changes that you see are due to Freeport edits. Also included are New Mexico Environmental Law Center and New Mexico Copper Corporation (NMCC) edits. Most of the NMCC comments were critiques and questions and were heavily weighted toward deferring regulation to MMD.

Also attached are the Financial Assurance rules. These rules were not changed due to the need to be consistent with MMD rules.

In addition you will find a summary discussion of some of the major issues that are present prepared by Kurt and myself.

Please let me know at any time if you have any questions. I am also available early next week (except Tuesday morning) to meet with you to discuss these drafts and any other questions you may have related to the copper mine rule and the rule development.

Bill

William Olson Consulting Services  
14 Cosmic Way  
Lamy, NM 87540  
(505) 466-2969

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## **MAJOR ISSUES IN 9/7/12 NMED 2<sup>ND</sup> INTERNAL DISCUSSION DRAFT**

### **General Comments**

- In response to MMD concerns language was added to the "Objective" to clarify that the copper mine rule is for prevention of ground water contamination under NMED authority under the Water Quality Act. Also added was MMD requested language to acknowledge that the mines are also regulated by MMD.
- We added requested language from MMD to provide copies of draft permits to MMD (even though this is already done now).
- We added more language to the engineering design sections to allow for demonstrations of alternate designs that can be administratively approved by NMED and reduce the need for variances.
- New Mexico Copper and the New Mexico Environmental Law Center have proposed changes to the Financial Assurance (FA) rules. Their changes would conflict with the FA rules of MMD. We have made no changes to the FA rules NMED proposed because they need to be consistent with MMD. (Note re MMD issues: Our FA rules contain extensive references to only applying for the purpose of discharge permit closure plans for the protection of ground water. They also defer hearings on FA release to MMD)

**Definitions "Critical Structure" and 20.6.7.33.B Slope Stability.** This has been a primary point of concern and discussion regarding both existing Freeport Chino and Tyrone Mine and the Questa Mine rock piles. We feel we have a reasonable defensible argument regarding the factor of safety number proposed for sloping of critical and non-critical structures at closure, and for pseudostatic analysis. Beyond the concerns that copper mine facilities should be designed using appropriate design criteria to minimize potential for slope failures, there is also concern that if we remove this language we will set precedent and it will have profound effects on other NMED facilities (e.g. Questa front rock piles). By putting factor of safety language in place it sets a strong foundation for insuring slope stability for protection of water quality (preventing uncontrolled release of contaminants) and undue risk to property.

**20.6.7.20A(1)** Freeport deleted the agreed language developed as part of the Tyrone Settlement (paragraphs 36-40) that discusses the need for a variance for new leach piles within the open pit. They are required to get a variance to operate a leach stockpile in an open pit since operating a leach pile in an open pit will result in an increase in ground water contamination. The Water Quality Act does not allow ground water contamination and without a variance this would violate the WQA. We set up the variance mechanism in the Tyrone Settlement to be able to legally permit these types of mining activities within the framework of the WQCC rules and the statute, and have now included this approach

in the rule. We accepted their deletion and addressed the variance issue in 20.6.7.20.A(1)(f) as discussed below.

**20.6.7.20.A(1)(f)** This addition is a modification of Freeport proposed language for alternate designs but we added in that a variance is necessary to compensate for their deletion of variance language in the preamble of Subsection A.

**20.6.7.20.B(2), 20.6.7.21.C(2)** Freeport wanted to remove the variance requirement for existing facilities that have caused ground water contamination. We have retained it. Removing the variance requirement for existing facilities is not in accordance with the Tyrone Settlement (paragraphs 41-43) language and continuing to discharge without a variance violates the WQA.

**20.6.7.21(B) New Waste Rock Stockpiles.** Freeport proposed to change the language such that it would allow ground water contamination from new waste rock stockpiles so long as the contaminated ground water is captured. The Water Quality Act does not allow ground water contamination and without a variance this would violate the WQA so we retained our language.

**20.6.7.22.A(4) New Tailing Impoundment Facilities.** Freeport proposed to change the language such that it would allow ground water contamination from new tailing impoundments so long as the contaminated ground water is captured. The Water Quality Act does not allow ground water contamination and without a variance this would violate the WQA so we retained our language.

**20.6.7.21A(2), 20.6.2.21.B(1)** Freeport added language regarding placement of materials inside (or outside) the open pit surface drainage area without a need for a variance. The way these were written they were essentially saying just about anything can be deposited in the open pit capture zone without engineering controls to prevent discharge of contaminants and ground water pollution. This is not in accordance with the Tyrone Settlement and would violate the WQA.

**20.6.7.24(4)** Freeport proposed to allow ground water contamination in the open pit by rule. This would violate the WQA.

**20.6.7.33C(1) and (2).** Top surface grading at closure has been the subject of much debate. There has never been a demonstration that grading top surfaces at such a shallow gradient (0.5%) is effective at shedding water. It is also a concern that it requires a great deal of experience and expertise to grade at such shallow gradients. That said, we agreed to it in closure permits at Tyrone and Chino (because of existing contamination and their capture systems, demonstrated capability to contain ground water contamination). We are not in agreement that this slope should be applied everywhere as an effective means to shed water from top surfaces. Infiltration into rock piles is a greater concern (faster movement of water through porous waste) for ground water protection. Top surface design needs to be such that water is shed from covers as quickly and effectively as possible, hence the slightly steeper gradient requirement for rock piles, but it still allows a mine to go to 0.5% slope upon a demonstration which Freeport has already done.

**20.6.7.33F(2). Cover performance standard.** Freeport proposed language would only be acceptable for the southwest part of the state where snowfall is minimal and precipitation is monsoon dominated. The rule needs statewide application if new mines are opened. Our language (which was developed after discussions with Freeport experts) would adequately cover any precipitation pattern found within the state of New Mexico, as well as the available materials currently being used for reclamation at the Tyrone and Chino Mines.

**STATE OF NEW MEXICO  
WATER QUALITY CONTROL COMMISSION**

**IN THE MATTER OF )  
APPEAL OF SUPPLEMENTAL DISCHARGE )  
PERMIT FOR CLOSURE (DP-1341) FOR )  
PHELPS DODGE TYRONE, INC., )  
Petitioner. )  
\_\_\_\_\_ )**

**Docket Nos.  
WQCC 03-12(A)  
WQCC-03-13(A)  
(Consolidated)**

**WRITTEN TESTIMONY OF MARY ANN MENETREY**

My name is Mary Ann Menetrey, and I am the Program Manager of the Mining Environmental Compliance Section of the Ground Water Quality Bureau (GWQB) of the New Mexico Environment Department (Department). I am presenting this written testimony on behalf of the Department in the proceeding on the appeal of the Supplemental Discharge Permit for Closure, DP-1341 (Closure Permit or DP-1341) for the Phelps Dodge Tyrone, Inc. (Tyrone) open-pit copper mine (Tyrone Mine) located in Grant County, New Mexico. The matter is before the New Mexico Water Quality Control Commission (Commission) on remand from the New Mexico Court of Appeals. My written testimony is marked as NMED Exhibit 11.

**I. Educational Background and Work Experience**

I have held the position of Program Manager of the Mining Environmental Compliance Section since May 2000. As Program Manager, I oversee all aspects of ground water discharge permitting under the Water Quality Act (WQA or Act) and Commission Regulations, 20.6.2 NMAC, for mining operations, including the review of discharge permit applications, issuance of discharge permits, approval of closure plans, abatement of contaminated ground water, and enforcement of the Act and Commission Regulations. I am therefore very familiar with the requirements of the WQA and the Commission's Regulations. The Mining Environmental Compliance Section has responsibility for approximately 50 discharge permits issued to mine



sites in the State. My duties as Program Manager also include overseeing and administering Administrative Orders on Consent for mine sites which have been proposed to the United States Environmental Protection Agency's National Priorities List of Superfund Sites. These sites include the Chino Mine, Questa Mine, Terrero Mine, and Blackhawk Mine. Investigation and cleanup of these mine sites is being conducted in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). I am also the Mining Act Team Leader for the Department, and am therefore responsible for coordination of the Department's role implementing the New Mexico Mining Act (Mining Act). I have provided technical review of permit applications and reclamation plans submitted pursuant to the Mining Act for over 60 mining and mining exploration operations to ensure that reclamation activities are protective of water quality. I supervise a staff of 11 persons, including 10 technical staff.

Prior to my current position, I worked in the Ground Water Pollution Prevention Section of the GWQB for over six years as a Surface Mining Reclamation Specialist providing review and oversight of ground water discharge permits, including closure plans, for numerous mining operations, including the Tyrone Mine. In addition to evaluating mine closure and reclamation plans, I evaluated the hydrogeologic and geochemical aspects of site characterization, reviewed monitoring plans and conducted environmental sampling. I supervised technical staff and interacted regularly with other state and federal agencies, the public and industry representatives. Prior to that position, I worked for three years as a Geologist and Water Resource Specialist and Supervisor in the Superfund Oversight Section of the GWQB. In that capacity, I was responsible for overseeing and conducting complex environmental and hydrologic investigations under CERCLA; prepared and reviewed environmental reports and reviewed technical reports regarding restoration of Superfund sites; and conducted extensive field sampling. I also worked

six years as a project manager and soil scientist for an environmental consulting firm. In that capacity, I was responsible for project management and performance of environmental investigations and remediation of soil, surface water, and ground water contamination and for erosion and dust control studies.

I have a Bachelor of Science degree in Soil Science from California Polytechnic State University, and was a Master's candidate in Soil Science at the University of California at Davis.

A copy of my resume is NMED Exhibit 12.

## **II. Summary of Testimony**

The purpose of my testimony is to provide a history of the operational permits issued to Tyrone by the Department, and to explain the interrelationship between the Tyrone operational permits and the Closure Permit. In my testimony, I will describe the approximately 30 year history of permitting the Tyrone Mine under the Water Quality Act, and explain how that history shows that the Department has treated the ground water beneath the site as protected under the WQA and Commission Regulations. The operational permits all require pollution prevention measures and abatement of contaminated ground water, and there are many conditions in the permits to ensure that ground water quality is protected underneath the entire Tyrone Mine site. As well, the operational permits contain and have contained closure requirements specific to the facilities covered by the permit. The closure requirements are and have been intended to ensure that ground water quality underneath the entire Tyrone Mine site is protected. Thus, the general course of conduct of the Department for almost 30 years shows that the parties have treated the ground water underneath the entire Tyrone Mine site, including ground water underneath leach stockpiles, as protected under the WQA and Commission Regulations.

In my testimony, I will describe the potential effect on the Tyrone operational permits if

the ground water underneath the mine site is found not to be protected: in that case, the ground water in and around the site will become more heavily contaminated than it already is. I will also describe the potential effect on ground water in the State: in that case, ground water that currently meets water quality standards is likely to become contaminated and existing contamination would not be cleaned up.

### **III. Discharge Permits at the Tyrone Mine**

#### **A. Relationship Between the Tyrone Operational Permits and the Closure Permit**

Two types of discharge permits are in place for the Tyrone Mine Facility: operational permits and the Closure Permit. Both types of discharge permits are issued pursuant to the WQA and Commission Regulations. The WQA and Commission Regulations do not distinguish between operational permits and closure permits, and generally a facility's operating requirements and closure plan are contained within one facility discharge permit. Tyrone, however, is a more complex site than most and, therefore, it currently has nine operational permits to address the different facilities on site. The Tyrone operational permits primarily address the operational phase of individual facilities at the Tyrone Mine, and include requirements for pollution prevention measures during operations, ground water monitoring, contingency plans, abatement of ground water contamination, and corrective action in the event of unauthorized discharges. The operational permits also include specific closure measures that are not included in the more general Closure Permit.

In accordance with Section 20.6.2.3107.A(11) NMAC, each of Tyrone's operational permits must include the required elements for a discharge plan, including a closure plan "to prevent the exceedance of standards of Section 20.6.2.3103 NMAC or the presence of a toxic pollutant in ground water after the cessation of operation . . . ." The Tyrone Closure Permit

broadly addresses closure requirements for the Tyrone Mine that will apply on a site-wide basis, including but not limited to requirements for regrading and covering of tailings and stockpiles, general closure of open pits and surface impoundments, closure of buildings and pipelines, site-wide abatement of ground water contamination and long-term water treatment, post-closure monitoring, financial assurance, and studies that need to be conducted to address certain closure requirements.

Because the Tyrone Closure Permit contains the general provisions for the closure plan for the mine site that apply to each of the facilities under the operational permits, DP-1341 is closely related to and dependent on the conditions and requirements of each of the operational permits. DP-1341 is called a "Supplemental Discharge Permit" because it supplements the requirements of all of the existing operational permits. Thus, any decisions affecting DP-1341 have the potential to significantly affect the existing terms and conditions of the operational permits, many of which have now been in place for decades. The requirements of the operational discharge permits cannot be separated from the requirements of the Closure Permit, and this should be considered in the context of what ground water is protected at the Tyrone Mine.

As I stated, for most dischargers the closure plan and the conditions relating to operations are included in the same discharge permit. This generally makes it easier to tie appropriate closure measures to the individual operational discharges covered in the permit. The permit conditions relating to operations require ground water protection measures to address the permitted discharges at the facility, and the closure plan ensures that closure measures protect ground water from those same discharges after cessation of operations. Where pollution prevention and source control measures are required for a facility during site operations, a

different standard for water quality protection should not apply for the closure plan.

For the Tyrone Mine, the Department determined that it was preferable to have a separate Closure Permit based on several factors. First, the technical aspects of determining how best to close and achieve source control for copper leach stockpiles and tailing impoundments with widespread ground water contamination are very challenging. It would have been inefficient and unwieldy for the Department to revisit closure issues at renewal of each of nine operational permits. Discharge permits must be renewed at least every five years. NMSA 1978, § 74-6-5(I).

Second, there is widespread ground water contamination throughout the Tyrone Mine site, and contamination from the various individually permitted stockpiles has commingled to a large extent. Therefore it made sense to issue a site-wide closure plan to require comprehensive source control measures to prevent further contamination after closure.

Third, following passage of the Mining Act in 1993, Tyrone was required to obtain a site-wide closeout plan for the Tyrone Mine from the Mining and Minerals Division of the Energy, Minerals and Natural Resources Department. In order to coordinate the requirements of the operational discharge permit closure plans with the Mining Act closeout plan, and to review and approve these plans more efficiently, it made sense to have one discharge permit for the entire site that dealt exclusively with closure measures.

## **B. Summary of Operational Permits and Their Pollution Prevention and Abatement Requirements**

### **1. Introduction**

The nine operational discharge permits for Tyrone are designated DP-166, DP-286, DP-363, DP-383, DP-396, DP-435, DP-455, DP-670, and DP-896. The boundaries of the areas covered under each these discharge permits are shown on a map of the Tyrone Mine labeled NMED Exhibit 13. A tenth operational discharge permit for the Tyrone tailing impoundments,

DP-27, was not renewed after 2003. Operational issues for the tailing impoundments are being addressed under a Settlement Agreement and Stipulated Final Order dated October 2003 (Tailings Settlement Agreement). The area covered under the Tailings Settlement Agreement is shown on NMED Exhibit 13. The operational discharge permits and the Tailings Settlement Agreement cover virtually the entire Tyrone Mine site and the area covered by the Closure Permit.

It is important to understand that the purpose of each of the operational permits is to prevent contamination of ground water underneath and around the areas of the mine that are permitted and to require abatement of ground water contamination if it has occurred. Therefore, each of the operational permits contains conditions and requirements specific to the facilities covered by the permit necessary to prevent ground water contamination and to abate any contamination which has occurred.

The first discharge permit was issued to Tyrone in 1978 and the last one was issued to Tyrone in May of this year. Therefore, beginning almost 30 years ago and continuing to the present, the Department (or its predecessor)<sup>1</sup> has regulated the Tyrone Mine site under the WQA and Commission Regulations so as to protect all ground water underneath and around the entire mine site.

The following is a list of the Tyrone Mine operational permits and selected pollution prevention and abatement conditions that are in place and required by those permits.

**2. Former DP-27/Currently Tailings Settlement Agreement for Tyrone Tailing Impoundments; First Issued November 9, 1978**

Pollution prevention and abatement conditions in place: 1. Operational discharges of

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<sup>1</sup> The Department's predecessor was the Environmental Improvement Division within the Health and Environment Department. For purposes of my testimony, I will simply refer to the "Department" when the reference is either to the Department, as currently authorized, or the Environmental Improvement Division.

process water, waste water, and municipal sludge to tailing impoundments must be eliminated to prevent these discharges from migrating through the unlined impoundments and further contaminating ground water; 2. Existing contaminated water which is impounded on the tailings must be removed to prevent infiltration into ground water; and 3. Closure of the tailing impoundments was required, including regrading and cover to prevent future ponding of water and provide source control to prevent further ground water contamination.

**3. DP-166 for No. 2 Leach System, Main Pit, Valencia Pit, San Salvador Hill Pit, Copper Mountain Pit, and SX/EW Plant; First Issued July 20, 1981**

Pollution prevention and abatement conditions in place: 1. Synthetically-lined ponds are required for collection of pregnant leach solution (PLS); 2. Above ground raffinate storage tanks must be utilized to avoid leakage that could impact underlying ground water; 3. A waste rock handling plan is required to ensure waste rock is placed in a manner that limits acid rock drainage beneath stockpiles; 4. Tyrone may not expand stockpile areas and volumes beyond permit limits in order to limit the footprint over which acid rock drainage may occur; and 5. Ground water contamination beneath the leach system and the mine must be abated to ground water quality standards or pre-operational water quality.

**4. DP-286 for No. 3 Leach System; First Issued January 24, 1985**

Pollution prevention and abatement conditions in place: 1. Synthetically lined PLS collection ponds are required that include a leak detection system; and 2. Ground water contamination from the No. 3 Leach System must be abated to ground water quality standards.

**5. DP-363 for No. 1A Leach System; First Issued February 11, 1985**

Pollution prevention and abatement conditions in place: 1. An above-ground tank is required for PLS collection; 2. PLS must be collected in a synthetically-lined pond; 3. Storm

water must be collected in a clay-lined collection pond; 4. Tyrone may not expand stockpile areas and volumes beyond permitted areas; and 5. An abatement plan is required to clean up existing ground water contamination to ground water quality standards within the area of the leach system.

**6. DP-383 for No. 1B Leach System; First Issued December 17, 1985**

Pollution prevention and abatement conditions in place: 1. PLS must be collected in a synthetically-lined pond or an above ground tank; 2. Tyrone may not expand stockpile areas and volumes beyond permitted areas; and 3. An abatement plan is required to clean up existing ground water contamination to ground water quality standards within the area of the leach system.

**7. DP-396 for No. 1C, 7A, and South Rim Pit Waste Rock Piles; First Issued July 21, 2000**

Pollution prevention and abatement conditions in place: 1. Active leaching of piles through addition of raffinate or placement of additional waste rock is not permitted; 2. Seepage water must be collected in synthetically-lined ponds; and 3. Abatement of existing ground water contamination to ground water quality standards is required within the area of the waste rock piles.

**8. DP-435 for No. 2A and 2B Leach Systems and 2B and 9A Waste Rock Piles; First Issued November 3, 1986**

Pollution prevention and abatement conditions in place : 1. Above-ground collection tanks must be utilized for PLS collection; 2. Synthetically-lined ponds must be utilized for PLS collection and for a mine dewatering surge pond; 3. Tyrone may not expand permitted stockpile areas and volumes; 4. A waste rock handling plan is required to prevent acid rock drainage that could contaminate ground water; and 5. Abatement of existing ground water contamination to

ground water quality standards is required within the leach system and waste rock pile areas.

**9. DP-455 for Gettysburg Leach System, Gettysburg Pit, and 7B Leach System; First Issued January 15, 1988**

Pollution prevention and abatement conditions in place: 1. Synthetically-lined ponds must be utilized for PLS collection; 2. Fluid levels must be limited in Gettysburg Pit; 3. Tyrone may not expand permitted stockpile areas and volumes; and 4. Abatement of existing ground water contamination to ground water quality standards is required within the Leach System and Pit areas.

**10. DP-670 for Savannah Pit and East Main Leach System; First Issued July 13, 1990**

Pollution prevention and abatement conditions in place: 1. Tyrone may not expand permitted stockpile areas and volumes; 2. A lined sump must be utilized for PLS collection; 3. Discharges of leach solutions, leach ore, or waste rock to the Savannah Pit are not permitted; 4. Tyrone may not mine below the water table in the Savannah Pit without modifying the discharge permit to ensure protection of water quality; and 5. Abatement of ground water contamination from the East Main Leach System and Savannah Pit is required.

**11. DP-896 for No. 1 Leach Stockpile and Acid Unloading Facility; First Issued May 18, 2007**

Pollution prevention and abatement conditions in Place: 1. Active leaching of the stockpile through addition of raffinate is not permitted; 2. A concrete sump must be utilized for collection of wash down water and stormwater; 3. Tyrone may not expand permitted stockpile areas and volumes; and 4. Abatement of existing ground water contamination to ground water quality is required within the Leach Stockpile and Acid Unloading Facility areas.

**12. Summary**

As demonstrated through this listing of permits and some of their conditions, each

operational discharge permit contains requirements to protect ground water beneath all permitted facilities and areas of the Tyrone Mine. These requirements include measures such as lining of collection ponds and implementation of waste rock handling plans to prevent acid rock drainage (ARD) that could contaminate ground water. The operational discharge permits also contain extensive requirements to implement corrective actions, such as seepage interceptor systems, where pollution prevention measures have failed, and to abate contaminated ground water.

Throughout the 30-year history of permitting the Tyrone Mine site, to the best of my knowledge Tyrone has never appealed any of the operational permits or the requirements within them to prevent ground water contamination or to abate ground water contamination beneath and around the mine site.

#### **C. Closure Plans for Tyrone**

Although DP-1341 was not issued until 2003, it is important to note that closure plans or requirements for closure plans were in place in the Tyrone operational discharge permits as early as 1986. These requirements established the Department's requirements for ground water protection after closure of individual facilities. For example, the requirement previously identified for DP-166 -- to return ground water quality beneath the No. 2 Leach Stockpile and the mine to ground water quality standards or pre-operational conditions after cessation of operations -- was incorporated into DP-166 as the part of the permit's closure plan in the permit renewal dated July 20, 1986. AR, DP-166, A-76. As the potential long-term effects of ARD associated with stockpiles at the Tyrone Mine became more evident, the Department began requiring closure plans for all of the operational permits that included source control measures such as regrading and covering to protect ground water beneath permitted facilities. The current requirements of DP-1341 are therefore a continuation of permitting actions previously conducted

under each of the operational permits for over a 20-year period.

**D. Examples of the Department's History of Protection of Ground Water at the Mine Site**

**1. Introduction**

For each new discharge permit application from Tyrone, the Department has required an analysis of the site geology and hydrology and the collection of ground water analytical data in order to determine the most appropriate requirements to protect ground water beneath individual facilities within the mine site. Although DP-1341 broadly addresses the entire mine for general closure purposes, each area of the mine has been previously scrutinized under the operational permits to ensure that ground water is protected. Below are examples of where the Department, over the course of permitting the Tyrone mine, has indicated that the ground water beneath the mine site is protected under the WQA and of where Tyrone has represented that it would not contaminate ground water beneath the mine site. These examples do not represent all the instances in which this conduct has occurred, but are simply intended to be illustrative of the general course of conduct over the years.

**2. No. 2 Leach Stockpile**

An example is DP-166, which permits the operations at the No. 2 Leach Stockpile. DP-166 was the first discharge permit for a leach stockpile, approved on July 20, 1981. The permit required numerous ground water monitoring wells inside the perimeter of the leach stockpile area. These monitoring wells were installed to establish pre-operational ground water quality beneath the proposed leaching operation and to monitor ground water quality following initiation of active leaching to determine whether the leaching operation was causing any ground water contamination. Selected locations of these wells are shown on an enlarged map of the Tyrone Mine labeled NMED Exhibit 14. Even though most of these wells within the perimeter of the

stockpile were eventually mined out or removed due to expansion of mine operations, the Department's requirement for installation of the wells shows that the Department was concerned with the ground water quality inside the perimeter of the leach stockpile area.

Tyrone initiated the discharge of raffinate and therefore active leaching of the stockpile in 1984. In a July 25, 1985 letter, the Department notified Tyrone that there was a "serious" ground water contamination problem at the leach stockpile based on water quality data from Monitoring Wells 6-3, 6-4, and 6-5 located in between the leach stockpile and the Main Pit. The Department required that Tyrone, "Propose specific strategies for the mitigation of the ground water contamination problem at the No. 2 leach dump site." AR, DP-166, A-48<sup>2</sup> (emphasis in original). The Department further stated that, "Any renewal application must demonstrate abatement of the existing ground water contamination and the prevention of future contamination." *Id.*

In 1985, there was considerably less information available than today regarding the long-term impacts of ARD at copper mine operations and the measures necessary to provide adequate source control and cleanup of ground water contaminated as a result of ARD. It is now well understood that, without source control, ARD can continue to be generated without active leaching by mine operators, and that precipitation alone can continue to leach contaminants from stockpiles for indefinite periods of time, even for centuries.

However, based on existing knowledge at the time, consultants for Tyrone in a report dated May 27, 1986 prepared an analysis suggesting that the ground water quality beneath the No. 2 Leach Stockpile could be returned to pre-operational conditions within a relatively short time frame. The analysis presumed that seepage from the leach stockpile would "decrease over time and eventually cease" following cessation of active leaching. AR, DP-166, A-66. The

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<sup>2</sup> "AR" refers to the Administrative Record in this matter.

report further indicated that the period of time following cessation of active leaching for ground water quality to “approach or reach the preleaching water quality . . . is estimated to be 4 to 30 years.” AR, DP-166, A-66. In a June 13, 1986 letter, the Department informed Tyrone that it must commit to returning the ground water quality to pre-operational water quality “at the wells between the No. 2 leach dump and the mine and at the wells within the No. 2 leach dump . . .” AR, DP-166, A-73 (emphasis in original). Tyrone agreed to this requirement in a June 23, 1986 letter to the Department. *See* AR, DP-166, A-74. The wells that Tyrone was required to monitor to determine if pre-operational ground water quality was achieved were Wells 2-2, 2-3, 2-5, 4-1, 6-3, 6-4, and 6-5, which are located within the boundaries of the leach stockpile area and are shown on NMED Exhibit 14.

Even though Tyrone’s 1986 analysis is now understood to have been faulty regarding timeframes and methodology to abate ground water contamination beneath the leach stockpiles, the important point is that the requirement to return ground water to established pre-operational water quality standards beneath the stockpile and the mine itself has been a requirement of DP-166 and of all subsequent renewals of DP-166, including the most recent renewal dated May 27, 2005. This permit requirement demonstrates that with issuance of the first discharge permit for a leach stockpile in 1981 at the Tyrone Mine, the Department required ground water to be protected and abated to water quality standards, or to pre-operational water quality, beneath permitted facilities including the leach stockpiles.

### **3. No. 1A Leach Stockpile**

At the No. 2 Leach Stockpile and other stockpiles, the Department did not anticipate the severity of ground water contamination that would result from Tyrone’s operation of the leach stockpiles, for which the Department issued operational discharge permits. In many cases,

Tyrone represented, prior to permit issuance, that degradation of ground water would be minimal or non-existent. This occurred with the No. 1A Leach Stockpile for which Tyrone represented that there was little or no ground water that would be affected by the leaching operations. See AR, DP-363, A-14; AR, DP-363, A-16; AR, DP-363, A-19; AR, DP-363, A-22; AR, DP-363, A-24; AR, DP-363, A-26.

Despite Tyrone's representation, the Department issued a discharge permit for the stockpile in 1985 to protect ground water at that site.<sup>3</sup>

#### 4. No. 3 Leach Stockpile

On May 25, 1983, Tyrone submitted a proposed discharge plan application for the No. 3 Leach Stockpile. A report by Woodward-Clyde Consultants attached to the proposal stated that, "In summary, potential impacts of ground-water discharges from the Phelps Dodge No. 3 Copper Leach system appear to be minimal." AR, DP-286, A-1. In further correspondence to NMED regarding the discharge plan application, Tyrone stated that because compacted clay was being placed in drainages at the base of the stockpile, "we have confidence in this design's ability to achieve the seepage rate and quantity described in the discharge plan which would not cause any ground water problems." AR, DP-286, A-12. Tyrone stated further that, "With a leachate flow of 10 gpm, the mixed water [ground water and leachate] could show an increase in contaminants, of approximately 1 to 2 percent and pH may be slightly affected. If complete mixing is accomplished the contaminant increases would not be detectable." AR, DP-286, A-17. Tyrone also represented that, "The Tyrone leach dumps 1, 1A, and 3 are located upon the alkaline Gila Conglomerate; and the above-described reaction [iron salt precipitation] should occur to act to

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<sup>3</sup> By 1996, a plume of contaminated ground water containing PLS was discovered by the Department to be moving from under the No. 1A Leach Stockpile and the No. 1C Waste Rock Pile in the subsurface of Oak Grove Draw, and from under the No. 1 and No. 1B Leach Stockpiles in the subsurface of Brick Kiln Gulch. The plumes extended approximately 3.5 miles to the east of the Tyrone Mine site.

seal their bases to prevent both the loss of copper-bearing solution and any possible effect on the quality of ground water.” AR, DP-286, A-18.

Although Tyrone represented that ground water would not be affected by its leaching operations, less than six months after Tyrone began leaching the No. 3 Leach Stockpile in early 1990, ground water from monitoring well P-12 exceeded ground water quality standards, and an investigation was begun. The investigation revealed contamination in the regional aquifer. By 2002, 405 monitoring and extraction wells had been installed to monitor and control the contamination, actions intended to protect the ground water in the area and prevent further contamination.

## 5. Summary

Over the many years that Tyrone has applied for and received discharge permits from the Department for its mining operation, Tyrone repeatedly represented that ground water quality underneath the mine site would not be impaired by the discharges for which it sought permits to operate. The fact that the ground water underneath the mine site is now heavily contaminated should not be a reason to allow that contamination to continue to exist, and to “write off” large areas of ground water, when that ground water was previously considered protected under the WQA when the discharge permits were issued.

The general course of conduct for nearly 30 years shows that the Department considered the ground water underneath and around the entire Tyrone Mine site subject to protection under the WQA and Commission Regulations; that the Department required all Tyrone operational discharge permits to include pollution prevention measures and abatement requirements to protect the ground water beneath and around the site; that the Department consistently required Tyrone to clean up ground water to ground water quality standards or to pre-operational water

quality standards; that Tyrone represented repeatedly that its discharges from the mine would not contaminate ground water; that Tyrone has put into place the pollution prevention measures required by its discharge permits; and that Tyrone did not appeal the pollution prevention measures or abatement requirements under the operational permits. As such, the general course of conduct for 30 years shows, in my view, that the Department acted as though the ground water beneath and around the Tyrone Mine site was subject to protection under the WQA and WQCC Regulations.

**IV. Potential Effect on the Tyrone Operational Permits and Ground Water Quality in the State If Ground Water Beneath the Tyrone Mine Is Not Protected**

If the Commission were to decide that any portion of the area beneath the Tyrone Mine is not a place of withdrawal of water for present or reasonably foreseeable future use, there would be significant ramifications for the operational discharge permits already in place. Pollution prevention measures currently in place could then be deemed unnecessary for some of the current discharges at the Tyrone Mine, and the operational permits for those discharges, potentially, would no longer be necessary. Even if the operational permits remained in place, many of the conditions of the permits might no longer be enforceable, including many of the substantial pollution prevention measures described above, such as prohibiting the expansion of leaching activities at certain stockpiles and requiring liners in surface impoundments.

Additionally, while all of the operational discharge permits presently require abatement of contamination that has occurred beneath permitted facilities, it is unclear whether the Department could enforce these provisions if it were determined the ground water is not protected. Without source control and many of the existing pollution prevention measures, ground water quality beneath the mine site would likely become considerably worse than it is now. Moreover, containment strategies -- such as pit dewatering and seepage interceptor

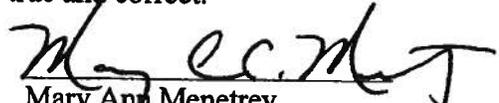
systems – if used alone would become increasingly difficult to manage and significantly more contaminated water would need to be treated.

Finally, the Department is concerned that the existing regulatory practices employed pursuant to the Water Quality Act at the Tyrone Mine may be significantly disrupted. These existing regulatory practices that protect ground water throughout the mine area have been in effect for almost 30 years under the operational permits.

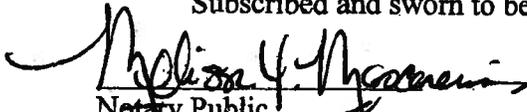
If ground water beneath any portion of the Tyrone Mine is determined not to be protected, there will be numerous dischargers from mine sites around the State that will seek to extend the same analysis to their facilities as well. The Ground Water Quality Bureau currently oversees approximately 50 discharge permits for mine sites, and approved closure plans for these mine sites consistently include implementation of source control measures to protect ground water beneath these sites, including regrading and covering of stockpiles. Any change in the Department's practices of protecting ground water at the Tyrone Mine has the potential of destabilizing many existing ground water protection activities currently in place throughout New Mexico and could result in ground water contamination in New Mexico that does not presently exist.

This concludes my direct testimony.

I, Mary Ann Menetrey, swear that the foregoing is true and correct.

  
Mary Ann Menetrey

Subscribed and sworn to before me this 9<sup>th</sup> day of July, 2007 by Mary Ann Menetrey.

  
Notary Public

My commission expires:

April 3, 2011