

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

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

No. WQCC 12-01(R)

**New Mexico Environment Department,
Petitioner**

WILLIAM C. OLSON PROPOSED STATEMENT OF REASONS

This Proposed Statement of Reasons is submitted for the purpose of assisting the New Mexico Water Quality Control Commission (Commission) in its deliberation in this proceeding. In adopting the Copper Mine Rule, the Commission must prepare a Statement of Reasons to fulfill the requirement that the rulemaking record indicates the reasoning of the Commission and the basis on which it adopted the regulations.

This Proposed Statement of Reasons outlines the legal authority for the proceedings and provides factual findings, with citations to the evidentiary record, and conclusions of law to support my proposed amendments to the Copper Mine Rule that were proposed by the New Mexico Environment Department (Department) on February 18, 2013. An August 22, 2013 Closing Argument is being submitted concurrently with this Proposed Statement of Reasons summarizing the issues in the proceeding and explaining why the Commission should adopt the amendments to the Copper Mine Rule as I have proposed. Concurrently with the filing of my Closing Argument and Proposed Statement of Reasons, I have filed an August 22, 2013 final proposed rule titled “*Joint Proposal from the New Mexico Attorney, Gila Resources Information*

Project/Turner Ranch Properties Inc., Amigos Bravos, and William C. Olson to Water Quality Control Commission Amended Petition” (Joint Proposal). This Joint Proposal indicates all changes proposed jointly by myself, the New Mexico Attorney General Office (AGO), Gila Resources Information Project (GRIP)/Turner Ranch Properties, L.P. (TRP) Inc., and Amigos Bravos (AB) to the Departments February 18, 2013 Amended Petition for the Proposed Copper Mine Rule as a result of the testimony presented at the Commission’s 2013 Copper Mine Rule hearings.

FINDINGS OF FACT

I. COMMISSION RULEMAKING REQUIRED

1. The Water Quality Act in Section 74-6-4 (E) NMSA 1978 grants the Commission authority to promulgate regulations to “*prevent or abate water pollution*” in the state of New Mexico. Olson Testimony WCO Ex. 1, pg. 5.

2. In 2009, the Commission was directed by amendments to the Water Quality Act to conduct rulemaking hearings to adopt rules for copper mines that specify the measures to prevent water pollution and monitor water quality. Industry specific rules were not previously allowed under the statute. Olson Testimony Tr. vol. 8, p. 2002, lines 11-15; and WCO Ex. 1, pg.7.

3. Prior to the 2009, permit rules were based on a model where an applicant for a discharge permit would propose a plan to protect ground water for the Department’s review. There was no guidance or specificity in the rules for the measures to be taken to protect water quality except that the plan as proposed by the applicant must demonstrate that the proposed plan will not cause an exceedance of the Commissions ground water quality standards. Olson Testimony WCO Ex. 1, pg. 7.

4. The 2009, amendments to the Water Quality Act (2009 Water Quality Act amendments) removed a provision in 74-6-4(E) stating that “*regulations shall not specify the method to be used to prevent or abate water pollution*”. Olson Testimony WCO Ex. 1, pg. 7.

5. Instead, the 2009 Water Quality Act Amendments inserted a new Subsection K in Section 74-6-4 NMSA 1978 stating that the Commission “*shall specify in regulations the measures to be taken to prevent water pollution and to monitor water quality*” and directed the Commission to promulgate industry specific rules for the copper mine industry. Olson Testimony WCO Ex. 1, pg. 7.

II. COMMISSION RULEMAKING HEARINGS

6. Over 11 days between April 9, 2013 and May 3, 2013, the Commission held a public rulemaking hearing in Santa Fe and Silver City, New Mexico on a petition from the Department to adopt a Copper Mine Rule. Tr. vols. 1-11.

7. During the Commission’s rulemaking hearing, two witnesses presented technical testimony on behalf of the Department; nine witness presented technical testimony on behalf of Freeport-McMoRan Tyrone Inc., Freeport-McMoRan Chino Mines Company, and Freeport-McMoRan Cobre Mining Company (collectively “Freeport”); two witnesses presented technical testimony on behalf of the AGO; two witnesses presented technical testimony on behalf of GRIP/TRP; two witnesses presented technical testimony on behalf of AB; and William C. Olson was a witness presenting independent technical testimony on his own behalf as a member of the public. A number of members of the public also presented public comment. Each of these witnesses presented written direct testimony and oral summaries of their testimony and was cross-examined by the other parties. Several witnesses also presented written rebuttal testimony and oral sur-rebuttal and were cross-examined by the other parties on their testimony. Tr. vols. 1-11.

8. Witness William C. Olson is a private consultant on water quality issues and assisted the Department in the development of the Copper Mine Rule. He previously served as Bureau Chief of the Department's Ground Water Quality Bureau from October 2004 to October 2011. For 25 years, he implemented and enforced Commission rules adopted under the Water Quality Act regarding the issuance of discharge permits and overseeing soil and ground water reclamation activities with both the Department and the New Mexico Oil Conservation Division of the Energy, Minerals and Natural Resources Department (Oil Conservation Division). He served as a Commissioner on the Commission for 13 years, as designee for the New Mexico Oil Conservation Commission (Oil Conservation Commission). He also served as a Commissioner on the Oil Conservation Commission for over 5 years. Mr. Olson has Bachelors of Science degree in geology and a Master of Science degree in hydrology from the New Mexico Institute of Mining and Technology. Olson Testimony WCO Ex. 1, pgs. 1-3; WCO Ex. 2; and Tr. vol. 8, pg. 1999, line 21 to pg. 2002, line 10.

III. STATUTORY WATER QUALITY PROTECTION REQUIREMENTS

9. The Water Quality Act is the primary statute that governs protection of ground water quality in the State of New Mexico. Olson Testimony WCO Ex. 1, pg. 5.

10. The Water Quality Act was originally adopted in 1967 and created the Commission. Olson Testimony WCO Ex. 1, pg. 5.

11. The majority of the Water Quality Act as seen today that relates to discharge permitting for ground water quality protection was adopted in the 1970's. Olson Testimony WCO Ex. 1, pg. 5.

12. A primary function of the Commission's duties and powers under the Water Quality Act is to adopt rules to "*prevent or abate water pollution*" as set out in 74-6-4(E) NMSA

1978. The Commission when adopting specific rules for discharge permits for copper mine facilities must prevent water pollution. Olson Testimony WCO Ex. 1, pg. 5.

13. Section 74-6-4(H) NMSA 1978 of the Water Quality Act gives the Commission the authority to grant exceptions to its rules subject to limitations after a public hearing. In particular, 74-6-4(H) NMSA 1978 specifies, *“The commission may only grant a variance conditioned upon a person effecting a particular abatement of water pollution within a reasonable period of time. Any variance shall be granted for the period of time specified by the commission. The commission shall adopt regulations specifying the procedure under which variances may be sought, which regulations shall provide for the holding of a public hearing before any variance is granted”*. Olson Testimony WCO Ex. 1, pgs. 5-6.

14. Section 74-6-4(H) NMSA 1978 contemplates that there are circumstances under which a permit applicant may be allowed, through the granting of a variance, to cause temporary pollution of water as long as it is abated within a reasonable period of time. However, a person is limited from being granted approval of a variance that allows permanent or long-term water pollution. Olson Testimony WCO Ex. 1, pg. 6.

15. Section 74-6-5(E)(3) NMSA 1978 of the Water Quality Act requires that the constituent agency deny a discharge permit if *“the discharge would cause or contribute to water contaminant levels in excess of any state or federal standard. Determination of the discharge’s effect on ground water shall be measured at any place of withdrawal of water for present and reasonably foreseeable future use”*. Olson Testimony WCO Ex. 1, pg. 6.

16. The plain language of Section 74-6-5(E)(3) NMSA 1978 explicitly prohibits approval of a discharge permit that allows ground water to be contaminated above water quality

standards at “*any place of withdrawal of water for present or reasonably foreseeable future use*”(“*place of withdrawal*”). Olson Testimony WCO Ex. 1, pg. 6.

17. The Commission's rulemaking authority is limited in the Water Quality Act by the provisions of Section 74-6-12(F) NMSA 1978 that states that in adopting regulations “*reasonable degradation of water quality resulting from beneficial use shall be allowed. Such degradation shall not result in impairment of water quality to the extent that water quality standards are exceeded*”. Olson Testimony WCO Ex. 1, pg. 6.

18. Section 74-6-12(F) NMSA 1978 allows some degradation of ground water quality but prohibits degradation in excess of the water quality standards. Olson Testimony WCO Ex. 1, pg. 6.

19. Allowing a discharge to cause ground water pollution in excess of Commission standards without a variance violates the language of the Water Quality Act and authority granted the Commission. Any permit application that causes ground water pollution in this manner would be mandated to be denied pursuant to 74-6-5(E)(3) NMSA. Olson Testimony WCO Ex. 1, pg. 8.

20. The 2009 Water Quality Act Amendments in Section 74-6-4(K) NMSA 1978 require prevention of pollution mandating that the Commission “*shall specify in regulations the measures to be taken to prevent water pollution and to monitor water quality*”. Olson Testimony WCO Ex. 1, pg. 7.

21. The 2009 Water Quality Amendments of Section 74-6-4(K) NMSA 1978 require that the main purpose of the Commission Copper Mine Rule hearings is to prevent water pollution from copper mines. Olson Testimony WCO Ex. 1, pg. 7.

IV EXISTING COMMISSION POLLUTION PREVENTION RULES

22. Pursuant to authority granted to the Commission under the Water Quality Act, the Commission held rulemaking hearings in 1976 and subsequently in 1977 adopted rules for permitting of discharges. Olson Testimony WCO Ex. 1, pg. 8.

23. Under Commission rules in 20.6.2.3101.A NMAC, the purpose of the discharge permitting rules is for “*controlling discharges onto or below the surface of the ground 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.....*”. Under this existing Commission rule all ground water is to be protected under a discharge permit consistent with the provisions of the Water Quality Act. Olson Testimony WCO Ex. 1, pg. 8.

24. Under Commission rules in 20.6.2.4101.A NMAC, the purpose of the Commission rules on prevention and abatement of water pollution is to “*abate pollution of subsurface water so that all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, is either remediated or protected for use as domestic and agricultural water supply*”. Under this existing Commission rule all ground water in New Mexico is to be protected in the abatement of water pollution consistent with the provisions of the Water Quality Act. Olson Testimony WCO Ex. 1, pgs. 8-9.

25. There are numerous areas of the Commission rules that link to the Water Quality Act “*place of withdrawal*” permitting requirement in 74-6-5(E)(3) NMSA 1978. Both discharge permits and abatement plans, could also be required for a permitted facility that causes ground water pollution, must consider whether ground water is protected at a “*place of withdrawal of*”

water for present and reasonably foreseeable future use” or an application must be denied.

Olson Testimony WCO Ex. 1, pg. 9.

26. In existing Commission rules “*place of withdrawal*” permitting requirements occur in 20.6.2.7.AA NMAC in the definition of “*hazard to public*” which links “*place of withdrawal*” to a determination of whether a hazard to public health exists. This definition links to other existing Commission rules related to whether a permit can be approved. Olson Testimony WCO Ex. 1, pg. 9.

27. In existing Commission rules “*place of withdrawal*” permitting requirements occur in 20.6.2.3103 NMAC numeric water quality standards, which requires that a discharge “*will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section*”. Olson Testimony WCO Ex. 1, pg. 9.

28. In existing Commission rules, “*place of withdrawal*” permitting requirements occur in 20.6.2.3109.E NMAC and 20.6.2.3109. E(1) NMAC which allows the agency to modify a permit to abate water pollution based upon an exceedance of the 20.6.2.3103 NMAC standards which apply at a *place of withdrawal*”. Olson Testimony WCO Ex. 1, pg. 9.

29. In existing Commission rules “*place of withdrawal*” permitting requirements occur in 20.6.2.3109.H NMAC where a permit must be denied for “*the discharge of any water contaminant which may result in a hazard to public health .*” The definition of “*hazard to public health*” is required to apply at a “*place of withdrawal*”. Olson Testimony WCO Ex. 1, pg. 9.

30. In existing Commission rules “*place of withdrawal*” permitting requirements occur in 20.6.2.4103.B NMAC where ground water abatement standards link to the 20.6.2.3103

NMAC numeric water quality standards, which are required to be applied at a “*place of withdrawal*”. Olson Testimony WCO Ex. 1, pg. 10.

31. In existing Commission rules “*place of withdrawal*” permitting requirements occur in 20.6.2.4106.E NMAC where design of a Stage 2 abatement plan links back to attainment of the 20.6.2.3103 NMAC numeric water quality standards, which are required to be applied at a “*place of withdrawal*”. Olson Testimony WCO Ex. 1, pg. 10.

32. In existing Commission rules “*place of withdrawal*” permitting requirements occur in 20.6.2.4109.F NMAC where Stage 2 abatement plan approval is linked to attaining the 20.6.2.3103 NMAC numeric water quality standards, which are required to be applied at a “*place of withdrawal*”. Olson Testimony WCO Ex. 1, pg. 10.

33. In existing Commission rules “*place of withdrawal*” permitting requirements occur in 20.6.2.4112 NMAC where approval of completion of abatement is linked to attaining the 20.6.2.3103 NMAC numeric water quality standards, which are required to be applied at a “*place of withdrawal*”. Olson Testimony WCO Ex. 1, pg. 10.

34. Pursuant to its authority under the Water Quality Act, the Commission has also promulgated different types of variance rules. Existing Commission rules in 20.6.2.4103 NMAC allow a method for seeking alternative abatement standards that can exceed the Commission’s numeric water quality standards of 20.6.2.3103 NMAC under certain circumstances. In order to obtain alternative abatement standards, the permittee must be in the process of abatement, then petition the Commission, and the petition may be granted only after a public hearing. Olson Testimony WCO Ex. 1, pg. 10.

35. Under existing Commission rules in 20.6.2.1210 NMAC there is also a mechanism for considering site-specific variances to Commission rules that contains provisions

for individual variances in accordance with Section 74-6-4(H) NMSA 1978 of the Water Quality Act. In these cases, the Commission may only grant variances after a public hearing and variance terms are limited to five-year period. Olson Testimony WCO Ex. 1, pg. 10.

36. In recent Commission hearings for adoption of the Dairy Rule, in 20.6.6.18 NMAC, the Commission adopted a new variance rule for dairy facilities that allows for alternate discharge designs consistent with the Water Quality Act requirements. This variance rule implemented expanded criteria for consideration in granting variances including allowing that variances can be granted for the useful life of the feature and providing for 5-year review of the effectiveness of the variance. Olson Testimony WCO Ex. 1, pgs. 10-11.

V. HISTORICAL IMPLEMENTATION OF WATER QUALITY PROTECTION

37. There is a 46-year history of water quality protection of ground water in the State of New Mexico. Historically, all ground water has been required to be protected from discharges that may cause pollution of ground water unless it can be demonstrated that it does not have a present or foreseeable future use. Olson Testimony WCO Ex. 1, pg. 11.

38. In 1967 the State Engineer provided a letter to the Oil Conservation Commission declaring that *“All underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids is hereby designated by the State Engineer pursuant to 65-3-11(15) N.M.S.A., 1953 Compilation; except that this designation shall not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination”*. Olson Testimony WCO Ex. 1, pg. 11; WCO Ex. 4.

39. This designation was used during April 19, 1967 Oil Conservation Commission hearings in support of Oil Conservation Commission Order 3221, one of the early ground water pollution prevention measures taken in New Mexico. Olson Testimony WCO Ex. 1, pg. 11.

40. In response to 1973 amendments to the Water Quality Act, the Commission in 1977 adopted new rules that included discharge permitting and ground water standards. The purpose of the permitting rules as set out in 20.6.2.3101.A NMAC was for “*controlling discharges onto or below the surface of the ground [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 . .*”. Olson Testimony WCO Ex. 1, pgs. 11-12.

41. In 1985, the Oil Conservation Division requested an update of the State Engineer 1967 ground water determination. The State Engineer reaffirmed his 1967 determination that “*all underground waters*” were to be protected from contamination. Olson Testimony WCO Ex. 1, pg. 12; WCO Ex. 5; and WCO Ex. 6.

42. On February 26, 1987, the Director of the Environmental Improvement Division (predecessor to the Department) provided comments to the EPA on the 1986 final draft of Guidelines for Ground-Water Classification under the EPA Ground-Water Protection Strategy. Olson Testimony WCO Ex. 1, pg. 12; and WCO Ex. 7.

43. In his February 26, 1987 comments, the Director stated that “*Protected under the regulations for present and potential future use as domestic and agricultural water supply is all ground water having a concentration of 10,000 mg/l or less total dissolved solids (TDS)*”. Olson Testimony WCO Ex. 1, pg. 12; and WCO Ex. 7, pg. 2.

44. The Director also stated that, “*The WQCC system gives the same protection to present and potential future uses of ground water*” He further stated that “*The WQCC system has been in use in New Mexico for ten years since 1977. Experience has shown that this relatively*

clear and easily understood system is very effective in protecting ground water quality in the state". Olson Testimony WCO Ex. 1, pg. 12; and WCO Ex. 7, pg. 4.

45. William C. Olson worked for 25 years on implementing and enforcing the Water Quality Act and Commission rules for prevention and abatement of water pollution for both of the constituent agencies that enforce Commission rules. Through his regulatory experience with both constituent agencies New Mexico ground water was treated as a public resource of the state and all ground water was protected from contamination from discharges of water contaminants unless the applicant or permittee could demonstrate that the water did not have a present or reasonably foreseeable future use. That regulatory permitting and abatement interpretation was followed throughout his career with both the Oil Conservation Division and the Department up until his retirement as Bureau Chief of the Ground Water Quality Bureau of the Department in 2011. He worked on most types of discharge site in the state and this was a consistent interpretation on behalf of the state agencies for 25 years. Olson Testimony WCO Ex. 1, pgs. 12-13.

46. The ground water protection interpretations of the Department and the Oil Conservation Division over the history of the implementation of the Water Quality Act and Commission rules has been clear and consistent over time and have not allowed for point of compliance approach to water quality protection. Olson Testimony Tr. vol. 8, pg. 2005, lines 6-16.

VI. TYRONE MINE PLACE OF WITHDRAWAL LITIGATION

47. The Water Quality Act and the Commission rules as they exist today do not define the term "*place of withdrawal of water for present or reasonable foreseeable future use*" nor do they give direction as to how to determine where this area exists. Olson Testimony WCO Ex. 1, pg. 13.

48. The language “*place of withdrawal of water for present and reasonably foreseeable use*” under the Water Quality Act, as it was subsequently adopted by the Commission, was the subject of technically complex litigation in adjudicatory permit hearings before the Department and the Commission for over a decade. Olson Testimony WCO Ex. 1, pg. 13.

49. The Tyrone Mine “*place of withdrawal*” litigation is especially significant because the orders that resulted from these adjudication hearings were the first time that the Commission made an explicit determination on place of withdrawal and the Commission determination was applied to a copper mine subject to the Copper Mine Rule. Olson Testimony Tr. vol. 8, pg. 2005, line 23 to pg. 2006 line 4.

50. In the early 2000’s, the Tyrone Mine (at that time operated by Phelps Dodge Tyrone, Inc. and currently operated by Freeport McMoRan Tyrone (Tyrone)) objected to the Department’s conditions of approval contained in the Department’s draft closure permit for the Tyrone Mine. A major point of contention was that the Department conditions of approval for the closure permit applied to ground water at all places within the mine. Olson Testimony WCO Ex. 1, pgs. 13-14.

51. Tyrone’s closure permit appeal led to a 10-day evidentiary hearing before the Department in 2002. In 2003, the Department issued a 106 page Hearing Officer’s Report and 307 pages of Findings of Fact and Conclusions of Law and issued a the closure permit for Tyrone based on the Hearing Officer’s report, findings and conclusions. Olson Testimony WCO Ex. 1, pg. 14.

52. Tyrone appealed the Department issued closure permit to the Commission on July 3, 2003. Olson Testimony WCO Ex. 1, pg. 14.

53. The Commission held another 10-day evidentiary hearing in October and November of 2003. The Commission subsequently issued a decision in 2004 upholding the Department approved permit and concluded that the Tyrone Mine was a “place of withdrawal,” and that all ground water underneath the Tyrone Mine was required to be protected under the Water Quality Act. Olson Testimony WCO Ex. 1, pg. 14.

54. Tyrone was unsatisfied with this decision and appealed the Commission’s decision to the New Mexico Court of Appeals. Olson Testimony WCO Ex. 1, pg. 14.

55. In 2006, the Court of Appeals issued a decision that upheld all portions of the Department approved closure permit for the Tyrone Mine with the exception of conditions 4 and 17 of the permit. The Court of Appeals remanded conditions 4 and 17 of the discharge permit to the Commission concluding that the Commission decision that the entire mine site is a place of withdrawal was overly broad. Olson Testimony WCO Ex. 1, pg. 14; and WCO Ex. 8.

56. The Court of Appeals remand directed the Commission to conduct further proceedings to “*create some general factors or policies to guide its determination*” as to what constitutes a “*place of withdrawal*” under the Water Quality Act. Olson Testimony WCO Ex. 1, pg. 14; and WCO Ex. 8, page 18.

57. The court also decided to “*decline to adopt as a standard a “point of compliance”*” concept for the purposes of protecting ground water quality standards, as Tyrone had urged. Olson Testimony WCO Ex. 1, pg. 14; and WCO Exhibit 8, page 19.

58. In response to the Court of Appeals remand of conditions 4 and 17 of the Tyrone Permit, in 2007 the Commission held 24 days of hearings on the issue of “*place of withdrawal*”. Olson Testimony WCO Ex. 1, pg. 15.

59. In these Commission hearings, the Department presented extensive testimony on proposed criteria that are relevant and useful to the determination of whether there is a present or reasonably foreseeable future use of ground water at and around the Tyrone Mine. Olson Testimony WCO Ex. 1, pg. 14; and WCO Exhibit 9, pages 4-11.

60. The Department proposed criteria were selected to be relatively general and neutral criteria that would not be controversial, cover a broad range of issues that the Commission needs to consider in making these types of decisions, and could be applicable to any site or type of facility. The Department proposed criteria were:

- (a) Site hydrology and geology;
- (b) The quality of ground water prior to any discharge from that facility;
- (c) Past and current land use in the vicinity;
- (d) Potential future land use in the vicinity;
- (e) Past and current water use in the vicinity;
- (f) Potential future water use in the vicinity; and
- (g) Population trends in the vicinity.

Olson Testimony WCO Ex. 1, pg. 15; and WCO Exhibit 9, pgs. 4-11.

61. The Department presented extensive technical testimony on the application of these criteria to the Tyrone Mine and maintained that under these criteria ground water underneath the Tyrone mine site was a “*place of withdrawal*”, and required protection from contamination in excess of Commission standards. Olson Testimony WCO Ex. 1, pg. 15; and WCO Exhibit 9, pgs. 22-24.

62. Tyrone proposed alternate criteria and took the position that lands inside the 12,500-acre Mining and Minerals Division permit boundary for the Tyrone Mine were not a

“place of withdrawal”, and that the Commission water quality standards did not apply. Olson Testimony WCO Ex. 1, pgs. 15-16.

63. The Commission issued its *“Decision and Order on Remand”* on February 4, 2009. Olson Testimony WCO Ex. 1, pg. 16; and WCO Exhibit 10.

64. In its order on remand the Commission concluded as a matter of law that the Water Quality Act protected ground water at *“any place of withdrawal for present and reasonably foreseeable future use.”* Olson Testimony WCO Ex. 1, pg. 16; and WCO Exhibit 10, pg. 80, COL. 26.

65. In its conclusions of law, the Commission also concluded that the Water Quality Act *“does not establish any specific ‘point(s) of compliance’ for compliance with water quality standards”*. Olson Testimony WCO Ex. 1, pg. 16; and WCO Exhibit 10, pg. 80, COL. 27.

66. The Commission adopted the criteria for determining *“place of withdrawal”* as proposed by the Department. Olson Testimony WCO Ex. 1, pg. 16; and WCO Exhibit 10, pgs. 78-80.

67. Based upon the hearing testimony, the Commission applied these criteria to the Tyrone mine and made a number of determinations in support of the Department’s testimony. Olson Testimony WCO Ex. 1, pg. 15; and WCO Exhibit 10, pgs. 80-84.

68. The Commission included a 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).”* Olson Testimony WCO Ex. 1, pg. 16; and WCO Exhibit 10, pg. 81, paragraph 33.

69. The Commission held that 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.”. Olson Testimony WCO Ex. 1, pg. 16; and WCO Exhibit 10, page 84, paragraph 52.

70. Tyrone was again unsatisfied with the Commission decision and again appealed the decision to the Court of Appeals in March of 2009. Olson Testimony WCO Ex. 1, pg. 16.

71. The March 2009 Tyrone appeal to the Court of Appeals has been currently been stayed pending implementation of a Settlement Agreement and Stipulated Final Order (Tyrone Agreement) finalized between the Department and Freeport-McMoRan Tyrone on December 20, 2010. Olson Testimony WCO Ex. 1, pg. 16; and WCO Exhibit 11.

72. The Tyrone Agreement is a voluntarily negotiated, signed settlement agreement whereby the Department and Tyrone agreed to implement permitting mechanisms including a variance process for new and existing copper mine facilities. Olson Testimony Tr. vol. 8, pg. 2006, lines 24-23 and pg. 2007, lines 1-2.

73. The Tyrone Agreement requires Tyrone to meet water quality standards at its mine site or alternate abatement standards. Olson Testimony WCO Ex. 1, pg. 17; WCO Exhibit 11, pgs. 8-9, paragraphs 26-28; WCO Exhibit 11, pg. 11, paragraph 35; and WCO Exhibit 11, pg. 13, paragraph 43(a).

74. The Tyrone Agreement also allows a mechanism for Tyrone to request variances from water quality standards during operations for existing and new facilities and to petition the Commission for alternative abatement standards upon closure, consistent with the requirements of the Commission’s Decision and Order on Remand. Olson Testimony WCO Ex. 1, pg. 17; and WCO Exhibit 11 pgs. 12-14.

75. In addition, the Tyrone Agreement established an “*Open Pit Surface Drainage Area*”, similar to that proposed in 20.6.7.7.B(42) NMAC of the Copper Mine Rule. In this area,

some latitude may be given to construction of facilities that do not employ full technological controls for the protection of ground water through the variance process as long as water pollution is abated to applicable standards upon closure. Olson Testimony WCO Ex. 1, pg. 17; WCO Exhibit #11, pg. 6, paragraph 19; and WCO Exhibit #11, pages 12-14.

76. The Tyrone Agreement set out a clear framework for issuing discharge permits in a manner consistent with the requirements of the Water Quality Act, the Commission's rules, historical precedent of the Commission and its constituent agencies, and the Commission's February 4, 2009 Decision and Order on Remand in the Tyrone Mine litigation. Olson Testimony Tr. vol. 8, pg. 2006, lines 20-23; and WCO Ex. 1, pg. 17.

VII. WATER POLLUTION AT COPPER MINES

77. Open and underground mine workings, waste rock, leach piles and tailings at copper mines by virtue of their geological and geochemical nature, have a high probability of containing metals and metalloids which are toxic and if not otherwise contained can pollute ground water above standards. Kuipers Direct Testimony pg. 3, paragraph 6.

78. Both the Chino and Tyrone Mines in New Mexico, the state's two largest copper mines, are copper porphyry deposits with significant acid generation potential and accompanying metals leaching potential which have been demonstrated to impact and contaminate ground water above standards. Kuipers Direct Testimony pg. 3, paragraph 6.

79. Voluminous information on water pollution from copper mine discharge activities has been presented to the Commission at numerous hearings over the past ten years on the Tyrone Mine site near Silver City, New Mexico. Olson Testimony WCO Ex. 1, pg. 4.

80. Leach stockpiles are intentional discharges that generate highly acidic metal-laden leachates shown to cause contamination of ground water in excess of Commission water quality

standards. These facts have been presented to the Commission by the Department in prior hearings on the Tyrone Mine in 2007 and were undisputed findings of facts adopted by the Commission in their February 4, 2009 Tyrone Mine Decision and Order on Remand. During the Copper Rule Advisory Committee meetings in 2012, all parties acknowledged the high potential for ground contamination from leach stockpiles. Olson Testimony WCO Ex. 3, pg. 22; WCO Ex.15, page 11; WCO Ex. 16, pgs. 2939-2946; and WCO Ex. 10, pgs. 8-11.

81. Waste rock stockpiles can generate highly acidic leachate containing water contaminants that have the potential to cause ground water pollution in excess of Commission water quality standards. These facts have been presented to the Commission by the Department in prior hearings on the Tyrone Mine in 2007 and were findings of fact adopted by the Commission in their February 4, 2009 Tyrone Mine Decision and Order on Remand. During the Copper Rule Advisory Committee meetings in 2012, all parties acknowledged the potential for ground contamination to occur from acid mine drainage from waste rock stockpiles and provided technical information to the Department in support of the waste characterization and material handling of waste rock. Olson Testimony WCO Ex. 3, pg. 28; WCO Ex.15, page 11; WCO Ex. 16, pgs. 2939-2946; and WCO Ex. 10, pgs. 8-10.

82. Tailing impoundments are large-scale facilities and can contain water contaminants that have the potential to cause ground water pollution in excess of Commission water quality standards. These facts have been presented to the Commission by the Department in prior hearings on the Tyrone Mine in 2007 and were adopted as findings of fact by the Commission in their February 4, 2009 Tyrone Mine Decision and Order on Remand. During the Copper Rule Advisory Committee meetings in 2012, all parties acknowledged the potential for ground contamination to occur from tailing impoundments. Olson Testimony WCO Ex. 3, pg.

32; WCO Ex.15, pgs. 9-10; and WCO Ex. 10, pgs. 8-10.

83. Data on file with the Department has shown that ground water contamination at existing copper mine facilities can migrate to great distances. An FMI monitoring report for discharge permit DP-484 on tailings pond 7 at the Chino Mine titled “Results of 2011 DP-484, Groundwater Monitoring and Tailings Pond 7 Interceptor Well Field Performance Evaluation, Chino Mines Company, Grant County, New Mexico” shows that sulfate contamination of the shallow aquifer underlying tailings pond 7 extends at least 3,000 feet downgradient of the tailings impoundment. Olson Testimony WCO Ex. 3, pg. 12; and WCO Ex.13.

84. The Department presented extensive expert witness testimony on the extent of ground water contamination resulting from mining operations at the Tyrone Mine during the 24 days of the Commission’s Tyrone Mine Remand Hearings held in 2007. A Department map depicting contaminated aquifer monitoring wells at the Tyrone Mine shows ground water contamination extending approximately 2 miles downgradient of the east side of the mine site. Olson Testimony WCO Ex. 3, pg. 12; and WCO Ex.14.

85. Department expert witness Clint Marshall testified during the 2007 Commission Tyrone Mine Remand Hearings that extensive ground water contamination from mining activities has occurred at the Tyrone Mine with a plume of contamination extending for three-and-a-half miles offsite. The leading edge of the plume of contaminated ground water was about a half mile from Tyrone’s own production wells located down in Oak Grove Draw. Olson Testimony WCO Ex. 3, pg. 12; WCO Ex. 15, page 11; WCO Ex. 16, pgs. 2945-2946; and WCO Ex. 16, pg. 2946.

86. The Commission recognized factual information regarding extensive ground water contamination in findings of fact in its Tyrone Mine February 4, 2009 “Decision and Order on Remand”. Olson Testimony WCO Ex. 3, pg. 12; and WCO Ex. 10, pgs. 8-11, FOF 27-42.

VIII. COPPER MINE RULE DEFICIENCIES

A. Water Quality Act, Commission Rules, Historical Implementation of Ground Water Protection in New Mexico and Place of Withdrawal Litigation Inconsistencies

87. Parties to the hearing supported adoption of a Copper Mine Rule and supported a majority of the proposed provisions of the Copper Mine Rule. However, William C. Olson identified some major defects in portions of the rule that will not prevent water pollution as statutorily required by the Water Quality Act. Olson Testimony WCO Ex. 1, pg. 4; and WCO Ex. 1, pgs. 17-26.

88. As proposed by the Department, the Copper Mine Rule would allow construction and operation of unlined facilities for the intentional pollution of ground water in excess of Commission standards underneath a permitted facility and downgradient of the facility up to a point of compliance a distance away from the discharge site. Olson Testimony WCO Ex. 1, pg. 20.

89. As proposed by the Department, pollution would be able to occur at copper mines under the Copper Mine Rule without the need for a variance as set out in the Water Quality Act and existing Commission rules. New facilities and failed existing facilities would be authorized by rule to pollute water. This includes the construction of future mines with underlying clean ground water, construction of new facilities at existing mines in areas that may contain clean water or continued operation of failed existing facilities that have contaminated ground water in excess of applicable standards. Olson Testimony WCO Ex. 1, pg. 20.

90. As proposed, the Copper Mine Rule does not give consideration to the statutory requirements of 74-6-5(E)(3) NMSA 1978 for a site-specific determination of what constitutes a “*place of withdrawal*”. This is contrary to the plain language of the Water Quality Act, historical

precedent of the application of the Water Quality Act and Commission Rules, the Commission's decisions in both the original Tyrone appeal and the remand hearings on Tyrone, and the direction given by the Court of Appeals in its opinion on the Tyrone appeal. Olson Testimony WCO Ex. 1, pg. 20.

91. The issue of "*place of withdrawal*" has been a central issue of permit litigation related to issuance of the Tyrone mine closure permit for over ten years and the Court of Appeals has directed the Commission to clarify this issue. The proposed rule does not contain any proposed criteria for determining if a mine disposal site is a "place of withdrawal" of water as directed by the court. WCO Ex. 1, pg. 20.

92. The proposed rule effectively makes an advance determination that all future mine sites and all new mine facilities at existing mines are not places of withdrawal without consideration of any site specific ground water factual information, including information on the use of ground water at those sites. This type of advance determination cannot be made since the facilities, locations, and site-specific conditions are unknown at this time. Olson Testimony WCO Ex. 1, pgs. 20-21.

93. Application of objective criteria for defining "*place of withdrawal*", as adopted by the Commission in their February 4, 2009 Decision and Order on Remand for the Tyrone Mine, is likely to lead to a determination that ground water has a present or reasonably foreseeable future use. Only in limited circumstances will ground water be found not to have a reasonably foreseeable future use consistent with the intent and purpose of the Water Quality Act to protect state water resources by preventing and abating water pollution in order to meet the needs of New Mexico to protect its limited state water supplies now and into the future. Olson Testimony WCO Ex. 1, pg. 21.

94. In its June 10, 2004 Order affirming the closure permit, the Commission adopted a rebuttable presumption that all ground water with less than 10,000 milligrams per liter TDS “*is protectable for present or reasonably foreseeable future use.*” The Court of Appeals did not disturb or overturn that conclusion. This rule as proposed eliminates that rebuttable presumption and the need for a discharger to demonstrate that the ground water is not protectable thereby providing a copper mine a blanket exemption to pollute ground water without any type of “*place of withdrawal*” analysis. Olson Testimony WCO Ex. 1, pg. 21 and WCO Ex. 8, pg. 17, paragraph 35.

95. As proposed, the rule creates a direct conflict between the Copper Mine Rule and the Water Quality Act including the potential for public hearings. When the Department attempts to approve a discharge permit pursuant to the Copper Mine Rule that allows pollution by rule from unlined discharge facilities, it is likely the public will challenge the permit. Since the Water Quality Act in 74-6-5(E)(3) NMSA 1978 requires that a permit be denied if the discharge would cause an exceedance of standards at any place of withdrawal of water for present or reasonably foreseeable future use, the public would have a good case to seek denial of a permit. Olson Testimony WCO Ex. 1, pgs. 21-22.

96. According to the proposed rule, ground water pollution from a waste rock stockpile or a tailing impoundment would only need to be measured at monitoring wells located downgradient of the associated downgradient ground water interceptor well system, which captures the polluted ground water. In the case of a flow-through open pit, compliance with water quality standards would be at a monitoring well network installed around the perimeter of the open pit a considerable distance from the open pit. This establishes a point of compliance concept allowing all ground water underneath and downgradient of the interceptor wells system or flow-

through pit to be polluted in excess of water quality standards, contrary to the Water Quality Act and the Commission's prior decisions. Olson Testimony WCO Ex. 1, pg. 22.

97. Under a point of compliance concept, if the ground water from the downgradient point of compliance well or wells meet standards, then all ground water interior to these monitoring wells does not need to meet standards. Such ground water would not be prevented from being polluted nor protected from pollution. It would not need to meet standards. Olson Testimony WCO Ex. 1, pg. 22.

98. Ground water is not static; it moves and water pollution can spread. A future production well installed in a clean part of the aquifer, outside at a point of compliance could draw in contamination from a distance away. Olson Testimony WCO Ex. 1, pg. 22.

99. The Oil Conservation is also a constituent agency of the Commission. In implementing the Water Quality Act and Commission rules, the Oil Conservation Division does not apply a point of compliance concept. Olson Testimony WCO Ex. 1, pg. 22.

100. A point of compliance concept is contrary to the purpose and requirements of the Water Quality Act, Commission rules, the 35-year historical precedent of implementation of the Water Quality Act and Commission rules, and Commission decisions in the Tyrone litigation. Olson Testimony WCO Ex. 1, pg. 22.

B. Technical Feasibility and Water Rights

101. The authorization of pollution by rule from unlined tailing impoundments does not account for the fact that it is feasible to build lined tailing impoundments that prevent water pollution. Olson Testimony WCO Ex. 1, pg. 23.

102. Lining a tailings impoundment may be practical where a future mine site may not have the water rights to implement large-scale interceptor well systems. Olson Testimony WCO Ex. 1, pg. 23.

103. There is no requirement in the rule that an applicant or permittee provide proof that they have adequate water rights to operate an interceptor well system. Olson Testimony WCO Ex. 1, pg. 23.

104. The ground water contamination that will occur from a tailings impoundment is large scale and will be conducted over a very long time period. Consequently, a significant amount of water rights will be necessary to operate the ground water pumping system. Olson Testimony WCO Ex. 1, pg. 23.

105. There is currently a future mine site that does not have extensive water rights for operating interceptor well systems downgradient of a tailings system, the proposed Copper Flats Mine near Hillsboro, New Mexico. Olson Testimony WCO Ex. 1, pg. 23.

106. New Mexico Copper Corporation is currently proposing to reopen the mine and was a member of the Copper Rule Advisory Committee and Copper Rule Technical Committee. Olson Testimony WCO Ex. 1, pg. 23.

107. On May 3, 2012, New Mexico Copper made a technical presentation to the Copper Rule Technical Committee regarding their proposed engineering design for a 530-acre tailing impoundment, which included a liner system. A lined system is being proposed partly because of limited water rights for the mine site. Olson Testimony WCO Ex. 1, pg. 23; and Diechmann Testimony Tr. vol. 8, pg. 2084, line 16-18

108. New Mexico Copper Corporation's presentation on engineering design is similar to New Mexico Copper's proposed lined tailing impoundment design contained in operation plans

submitted to the State of New Mexico Mining and Minerals Division, the Department, and the Bureau of Land Management. Olson Testimony WCO Ex. 1, pg. 23; and WCO Ex. 12, Appendix D, pages 6-7 and drawings 1-9.

109. New Mexico Copper is continuing to plan for use of an engineered composite liner system for disposal tailings at their tailings storage facility. This design was proposed before the proposed Copper Mine Rule was developed. Diechmann Testimony Tr. vol. 8, pg. 2073, line 23-25 and pg. 2074, line 1-4.

110. Construction of lined facilities that prevent water pollution are feasible and practical and protect limited ground water supplies in New Mexico. Olson Testimony WCO Ex. 1, pg. 23.

C. Potential for Harm

111. It is the burden of the discharger to show that the site is not a place of withdrawal of water for present or reasonably foreseeable future use consistent with the Commission intent in the initial adoption of the rules in 1977. Olson Testimony WCO Ex. 1, pg. 24.

112. Under existing Commission rules in 20.6.2.3109.C(2) NMAC, consistent with the Water Quality Act, the Department can approve a discharge permit only if the discharger demonstrates that the discharge will not result in an exceedance of standards at any place of withdrawal of water for present or reasonably foreseeable future use. This standard procedure has been followed by the Department and the Oil Conservation Division in the implementation and enforcement of Commission rules for at least 25 years. Olson Testimony WCO Ex. 1, pg. 24.

113. Under the proposed Copper Mine Rule in 20.6.7.21.B(1)(d) NMAC and 20.6.7.22.A(4)(b) NMAC, the burden of proof would now be shifted to the agency to prove that ground water standards will be exceeded. This creates a new rebuttable presumption that acid

mine drainage from waste rock stockpiles and major mine contaminant sources such as a tailing impoundment do not cause water pollution unless the agency proves otherwise. Therefore, pollution of ground water must then occur before it can be prevented. Olson Testimony WCO Ex. 1, pg. 24.

114. Under the point of compliance concept proposed in the Copper Mine Rule, water pollution will likely become extensive before the Department can meet this requirement and extensive harm to the state will occur through the loss of water resources. Olson Testimony WCO Ex. 1, pg. 24.

115. If a new unlined tailing impoundment were to be built comparable to Tailing Pond 7 at the Chino Mine, approximately 1,600 acres (or 2.5 square miles) of ground water resources underlying the impoundment would be lost at a minimum. That does not account for ground water contamination that has migrated outside the impoundment to the interceptor well system and its downgradient compliance monitoring well. This is a significant loss of public resources especially when approximately 90% of the residents of the state rely on ground water as a source of drinking water and the state is experiencing high demand for its ground water resources due to severe drought. Olson Testimony WCO Ex. 1, pgs. 24-25.

116. However, the point of compliance concept that the Department is proposing will result in an actual loss of water resources far greater than what may occur at a single mine unit such as a large-scale tailing impoundment. Leach stockpiles, waste rock stockpiles and tailing impoundments are contiguous throughout much of a copper mine facility. This causes the point of compliance for protection of water quality to be located outside the entire mining area where discharges are occurring. These mine areas are very extensive. At the Tyrone Mine, the point of compliance would be located outside an approximately 3 mile by 3 mile square mining area.

Effectively, 9 square miles of ground water resources at the Tyrone Mine would be allowed to be intentionally polluted above water quality standards. Again, this is a significant loss of public water resources when the state is experiencing high demand for its ground water resources due to severe drought. Blandford Testimony Tr. vol. 6, pg. 1489, line 15 to pg. 1500, line 22; and Blandford Testimony Tr. vol. 6, pg. 1500 line 23 to pg. 1501, line 6.

117. Allowance of pollution by rule and adoption of a point of compliance concept as proposed in the Copper Mine Rule will harm other water quality protection programs implemented by the state. Copper mine sites are some of the largest discharge sites with extensive water pollution. If this proposed rule is approved for copper mines, the approximately 900 other Department regulated facilities receiving discharge permits, and possibly oilfield facilities receiving discharge permits issued by the Oil Conservation Division, will seek that these rules apply equally to them as a matter of fairness. This includes discharge permits for molybdenum mines; uranium mines; dairies; municipal waste water treatment plants; industrial facilities; power plants; large scale domestic waste systems; Los Alamos National Laboratory Waste Isolation Pilot Plant; oil refineries; natural gas processing plants; natural gas compressor stations; oilfield service companies; brine wells; and geothermal facilities. These facilities could justifiably argue that they should also be allowed to intentionally cause water pollution as long as the pollution is contained by a ground water pumping system. Olson Testimony WCO Ex. 1, pgs. 25-26; and Tr. vol. 8, pg. 2007 lines 11-25 and pg. 2008, line 1.

118. Expansion of pollution by rule and point of compliance concepts to other discharge permits would greatly increase the amount of lost ground water resources. Olson Testimony WCO Ex. 1, pg. 26.

119. There are also other state programs that rely on the “place of withdrawal” approach to ground water pollution that could likewise be affected by approval of this proposed rule including hazardous waste permitting and cleanups under the Hazardous Waste Act and superfund site cleanups. Olson Testimony WCO Ex. 1, pg. 26.

IX. JUSTIFICATION FOR JOINT PROPOSAL RULE AMENDMENTS

120. There are modifications that must be made to sections of the proposed rule to correct identified deficiencies in the rule and make it consistent with the Water Quality Act, other Commission rules, historical precedent and prior Commission decisions on “*place of withdrawal*” as set out below for each referenced section. Olson Testimony WCO Ex. 1, pg. 26.

121. In general, the rule deficiencies can be corrected by removing rule language related to the point of compliance concept and keeping monitoring language consistent with current monitoring practice approved under existing discharge permits; including requirements for lining of waste rock stockpiles that may cause an exceedance of standards and tailing impoundments unless the applicant seeks a variance; adding a section on variances to provide for a clear and transparent public process for consideration of site specific factors and designs such that approvals can be granted for the operational life of the facility; and including additional lesser modifications for clarity and consistency with the Water Quality Act and Commission rules.

Olson Testimony WCO Ex. 1, pg. 26.

Section 20.6.7.7.B (2)

(2) “Additional conditions” means conditions and requirements included in a discharge permit pursuant to Section 74-6-5(D) NMSA 1978 that are based on site specific circumstances and that are in addition to those imposed in the rules of the commission. [Permit conditions included in any prior discharge permit of a copper mine facility may be included in any future discharge permit for the same facility and shall not be considered to be additional conditions.](#)

122. The above underlined language should be added to the definition of “*additional conditions*”. The Department has proposed this language as applicable to leach stockpiles in 20.6.7.20.B(2) NMAC, waste rock stockpiles in 20.6.7.21.C(2) NMAC and existing crushing, milling, concentrating, smelting or tailings impoundments in 20.6.7.22.B(2) NMAC. The concept that the Department is proposing in the language of 20.6.7.20.B(2), NMAC, 20.6.7.21.C(2) NMAC and 20.6.7.22.B(2) NMAC is appropriate. However, this language should be applicable to permit conditions contained in existing permits for all existing types of copper mine units currently operating under an approved discharge permit. Therefore, the Department’s applicable language from the end of 20.6.7.20.B(2), NMAC, 20.6.7.21C(2) and 20.6.7.22.B(2) NMAC should be deleted and placed it in the definition of “*additional conditions*” of 20.6.7.B(2) as shown above. Olson Testimony WCO Ex. 3, pg. 8.

Section 20.6.7.7.B (2)

(3) “Affected discharge unit” means the unit or units subject to a variance.

123. It is necessary to add a new Section 20.6.7.31 NMAC to the Copper Mine Rule containing language on variances for copper mine facilities. The rationale for inclusion of variance language in the Copper Mine Rule can be found in 20.6.7.31 NMAC. This new definition is necessary to define terms used within new variance Section 20.6.7.31 NMAC. Olson Testimony WCO Ex. 3, pg. 2.

Section 20.6.7.7.B (4)

(4) “Applicable standards” means either the standards set forth in 20.6.2.3103 NMAC including, when applicable, the existing concentration as of February 18, 1977 or ; the background as defined in this section; concentration approved by the department; or, for an existing copper mine facility, any alternative abatement standard approved by the commission pursuant to 20.6.2.4103.F NMAC.

124. The term “*existing concentration*” already is regulatory term in use in 20.6.2.3103 NMAC for determining the applicability of water quality standards. Because the definition of “*applicable standards*” in the Copper Mine Rule refers back to the standards of 20.6.2.3103 NMAC, it is not clear if adding the term “*existing concentration*” in this definition creates a conflict with the term as used in 20.6.2.3103 NMAC. The Department has interpreted the term “*existing concentration*” in 20.6.2.3103 NMAC as the concentration level in ground water in 1977, at the time that Commission discharge permit rules were promulgated. The meaning of this term can make a difference in terms of what standard is applied to a discharge site. In order to clarify the intent of this definition and to ensure that the interpretation of “*existing concentration*” is consistent with its use in 20.6.2.3103 NMAC, it is necessary to amend the definition of “*applicable standards*” as shown above. Brown Testimony Tr. vol. 4, pg. 847, line 11 to pg. 851, line 6.

125. It is also necessary to add the term “*for an existing copper mine facility*” to the end of this definition regarding alternate abatement standards. As written new facilities could use this definition to cause water pollution in excess of applicable standards and then seek alternate abatement standards so that the polluted ground water becomes the new standard. The intent of this provision was for alternate abatement standards to apply only to existing facilities. Olson Testimony Tr. vol. 9, pg. 2226, line 20 to pg. 2228, line 16.

Section 20.6.7.7.B (5)

~~(5) —“Area of open pit hydrologic containment” means, for an open pit that intercepts the water table, the area where ground water drains to the open pit and is removed by evaporation and/or pumping, and is interior to the department approved monitoring well network installed around the perimeter of an open pit pursuant to Paragraph (4) of Subsection B of 20.6.7.28 NMAC.~~

126. This definition is not necessary. This term has been deleted from all other sections of the rule in the Joint Proposal and replaced with the term “open pit surface drainage area”. “Open Pit Surface Drainage Area” is already a clearly defined term in the Copper Mine Rule as set out in 20.6.7.B(42) NMAC. The definition “Open Pit Surface Drainage Area” was also vetted and agreed upon by the Copper Rule Advisory Committee members and should be used for consistency throughout the rule in defining the area in which ground water contamination may occur from the presence of exposed mineral and rock faces within an open pit. It is acknowledged that the interaction of precipitation and oxygen with exposed rock faces in an open pit is difficult to prevent or control and will likely cause ground water contamination through runoff of stormwater into the open pit or through vertical migration of runoff into fractured rock within the pit. However, the Department proposed definition of “Area of Hydrologic Containment” creates new areas outside an open pit within which a copper mine facility would be allowed to intentionally cause water pollution that could be prevented with the implementation of best management practices and therefore this definition should be deleted. Olson Testimony WCO Ex. 3, pg. 2.

Section 20.6.7.7.B (7)

(7) “Background” means the concentration of water contaminants naturally occurring from undisturbed geologic sources ~~of water contaminants~~.

127. It is necessary to amend this definition. Background water contaminants originate from minerals in natural geologic sources that are in contact with water. The second use of the term “of water contaminants” above is redundant within the sentence and used twice in the definition. In addition, the second use of this term is confusing and technically awkward and therefore should be removed. Olson Testimony WCO Ex. 3, pg. 2.

Section 20.6.7.7.B (13)

(13) “Copper mine facility” means all areas within which mining of copper ore and its related activities that may discharge water contaminants occurs and where the discharge will or does take place including, but not limited to open pits; waste rock piles; ore stockpiles; leaching operations; solution extraction and electrowinning plants; ore crushing, ore milling, ore concentrators; tailings impoundments; smelters; pipeline systems, tanks or impoundments used to convey or store process water, tailings or impacted stormwater; and truck or equipment washing facilities, and any other mine operations that may discharge water contaminants.

128. The underlined language added above is necessary to clarify that the definition is related to mining of copper ore and to cover potential sources of any other water contaminants that may not be foreseen in the promulgation of this rule including mine processes that may be developed in the future. This added language clarifies that a copper mine facility needs to prevent water pollution from all mine operations that could act as sources of water contaminants that could cause an exceedance of Commission water quality standards in 20.6.2.3103 NMAC. Olson Testimony WCO Ex. 3, pg. 3.

Section 20.6.7.7.B (18)

(18) “Discharge” means spilling, leaking, pumping, pouring, emitting, or dumping of a water contaminant in a location and manner where there is a reasonable probability that the water contaminant may reach ground-surface or subsurface water.

129. The deletion of the term “*ground water*” and its replacement with the term “*surface or subsurface water*” is necessary to conform with the purpose of discharge permits issued under Commission rules, Commission rules for approval of discharge permits, and for consistency with existing Commission leak and spill rules. Pursuant to 20.6.2.3101.A NMAC, the purpose of discharge permits is to control discharges onto or below the ground surface to protect all ground water as well as surface water that is gaining from ground water inflows. In addition, pursuant to 20.6.2.3109.H(2) NMAC, the Secretary shall not approve a discharge permit that will cause any stream standard to be violated. In addition, the definition as currently

proposed is inconsistent with the current Commission definition of discharge used for the purposes of reporting leaks and spills as contained in 20.6.2.1203.C(1) NMAC. Olson Testimony WCO Ex. 3, pg. 3.

Section 20.6.7.7.B (33)

(33) “Leach stockpile” means stockpiles of copper ore and all other rock piles associated with mining disturbances that have been leached, are currently being leached or have been placed in a pile for the purpose of being leached.

130. The underlined language added above is necessary to clarify that the definition is related to mining of copper ore as discussed in Finding of Fact 128 of this Statement of Reasons.

Section 20.6.7.7.B (41)

(41) “Open pit” means the area within which copper ore and waste rock are exposed and removed by surface mining.

131. The underlined language added above is necessary to clarify that the definition is related to mining of copper ore as discussed in Finding of Fact 128 of this Statement of Reasons.

Section 20.6.7.7.B (42)

(42) “Open pit surface drainage area” means the area in which storm water drains into an open pit and cannot feasibly be diverted by gravity outside the pit perimeter, and the underlying ground water is hydrologically contained by continual pumping or evaporation of water from the open pit.

132. Various witnesses testified that the open pit would need to be maintained as a hydraulic sink through either pumping or evaporation. If pumping is required, such as at the Tyrone Mine, that pumping will have to continue for hundreds of years. For clarity of the intent of this definition, it is necessary to amend the language as shown above to clarify that if the pit requires pumping to maintain a hydraulic sink then that pumping must be continual. Brown Testimony Tr. vol. 3, pg. 672, line 20 to pg. 673, line 5; Brown Testimony Tr. vol. 4, pg. 917, lines 17-23; Shelley Testimony Tr. vol. 5, pg. 1137, line 21 to pg. 1138, line 22; Blandford

Testimony Tr. vol. 6, pg. 1422, lines 4-15; Blandford Testimony Tr. vol. 6, pg. 1464, line 20 to pg. 1465, line 15.

Section 20.6.7.7.B (49)

(49) “PLS” means pregnant leach solution that is generated from leaching [copper](#) ore or rock stockpiles.

133. The underlined language added above is necessary to clarify that the definition is related to mining of copper ore as discussed in Finding of Fact 128 of this Statement of Reasons.

Section 20.6.7.7.B (52)

(52) “Slag” means a partially vitreous by-product of the process of smelting [copper](#) ore.

134. The underlined language added above is necessary to clarify that the definition is related to mining of copper ore as discussed in Finding of Fact 128 of this Statement of Reasons.

Section 20.6.7.7.B (58)

(58) “Tailings” means finely crushed and ground rock residue and associated fluids discharged from an [copper](#) ore milling, flotation beneficiation and concentrating process.

135. The underlined language added above is necessary to clarify that the definition is related to mining of copper ore as discussed in Finding of Fact 128 of this Statement of Reasons.

Section 20.6.7.7.B (62)

(62) “Underground mine” means the below-surface mine workings within which [copper](#) ore and waste rock are removed.

136. The underlined language added above is necessary to clarify that the definition is related to mining of copper ore as discussed in Finding of Fact 128 of this Statement of Reasons.

Section 20.6.7.7.B (64)

(64) "Variance" means a commission order establishing requirements for a copper mine facility or a [unit or units portion](#) of a copper mine facility that are different than the requirements in the copper mine rule.

137. A minor language change is necessary as shown above to clarify that the rule applies to “units” of the copper mine. “Units” is a defined term in 20.6.7.7B(63) NMAC.

Section 20.6.7.7.B (65)

(65) “Waste rock” means all material excavated from a copper mine facility that is not copper ore or clean top soil.

138. The underlined language added above is necessary to clarify that the definition is related to mining of copper ore as discussed in Finding of Fact 128 of this Statement of Reasons.

Section 20.6.7.10.C

C. Notwithstanding Subsection F of 20.6.2.3106 NMAC, a permittee shall submit an application for renewal of a discharge permit for a copper mine facility or a unit portion of the facility to the department at least 270 days before the discharge permit expiration date, unless closure of the facility is approved by the department before that date.

139. A minor language change is necessary as shown above to clarify that the rule applies to “units” of the copper mine. “Units” is a defined term in 20.6.7.7B(63) NMAC.

Section 20.6.7.10.J(2)

J. The secretary shall approve a discharge permit provided that it poses neither a hazard to public health nor undue risk to property, and:

- (1) the requirements of the copper mine rule are met;
- (2) the provisions of 20.6.2.3109 NMAC are met, with the exception of Subsection C of 20.6.2.3109 NMAC; and
- (3) denial of an application for a discharge permit is not required pursuant to

Section 74-6-5(E) NMSA 1978.

140. The Department testified that the objective of the Copper Mine Rule is to control discharges of copper mine contaminants so that ground water meets the New Mexico water quality standards at all locations of present and future use for domestic and agricultural purposes. Brown Direct Testimony pg. 3.

141. Paragraph (2) exempts “*place of withdrawal*” permit approval considerations of 20.6.2.3109.C NMAC in the Copper Mine Rule while at the same time Paragraph (3) of this

subsection requires denial of a permit if the discharge causes an exceedance of standards at a “*place of withdrawal*” pursuant to the Water Quality Act in 74-6-5(E). There is considerable confusion amongst the parties as to effect of Paragraph (2) exempting the permit approval requirements of 20.6.2.3109.C NMAC. Brown Testimony Tr. vol. 3, pg. 646, line 15 to pg. 647, line 9; Brown Testimony Tr. vol. 4, pg. 783, lines 2-10; Eastep Testimony Tr. vol. 5, pg. 1142, lines 13-16; Shelley Testimony Tr. vol. 5, pg. 1126, line 16 to pg. 1127, line 4; Blandford Testimony Tr. vol. 6, pg. 1514, lines 14-21; Olson Testimony Tr. vol. 9, pg. 2311, lines 17 to pg. 2312, line 20; and Olson Testimony Tr. vol. 10, pg. 2438, line 4 to pg. 2440, line 2.

142. Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation require that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently, approval of a permit must consider whether sources of water pollution may cause an exceedance of Commission standards at any potential “*place of withdrawal*”. Consistent with these findings the language “*with the exception of Subsection C of 20.6.2.3109 NMAC*” should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.11.H

H. Determination of maximum daily discharge volume. An application shall include the following information.

(1) The proposed maximum daily discharge volume of process water and tailings [for each discharge location](#) and a description of the discharge locations and the methods and calculations used to determine that volume.

143. For clarity, it is necessary that the volume of each discharge source be specified in the permit application to effectively identify discharge areas. This is already done in existing discharge permits and the same information should be a part of the information submitted in a

permit application. Scott E. E, pg. 5; NMED Ex. 18, pg. 5; Shelley Ex. 3, pgs. 3-4, Shelley Ex. 4, pg. 5.

Section 20.6.7.11.H

K. Surface soil survey, geology and hydrology. An application shall include:

(1) the most recent regional soil survey map and associated descriptions identifying surface soil type(s);

(2) a geologic map covering the area within a one-mile radius of the copper mine facility and geologic and lithological information which provides a geologic profile of the subsurface conditions beneath the copper mine site, including the thickness of each geologic unit, identification of which geologic units are water bearing, cross sectional diagrams and sources of all such information; ~~and~~

(3) hydrologic information on any surface waters of the state within one-half mile of the boundary of the copper mine facility, and of subsurface conditions for all water bearing zones beneath the copper mine facility including maximum and minimum depths to ground water, direction of ground water flow, hydrologic gradients shown by potentiometric maps, transmissivity and storativity, and ground water quality. The sources of all such information shall be provided with the application; ~~and~~

(4) a hydrologic model of any anticipated or existing open pit surface drainage area, which includes a model of the anticipated or existing areas of surface water and ground water containment.

144. A hydrologic model is necessary to provide a projection or estimate of the ground water flow regime and the area of hydrologic impacts of the mine operations in order to evaluate a copper mine application and accurately locate monitoring well networks. Therefore, a new Paragraph (4) should be added, as shown above, to accomplish this. Blandford Testimony Tr. vol. 6, pg. 1394, line 14 to pg. 1395, line 5.

Section 20.6.7.11.T

T. Closure plan. An application shall include a closure plan for all ~~units portions~~ of a copper mine facility pursuant to Subsection A of 20.6.7.18 NMAC, 20.6.7.33 NMAC, 20.6.7.34 NMAC and 20.6.7.35 NMAC unless closure of the copper mine facility is covered, or will be covered, by a separate closure discharge permit.

145. A minor language change is necessary as shown above to clarify that the rule applies to “units” of the copper mine. “Units” is a defined term in 20.6.7.7B(63) NMAC.

Section 20.6.7.11.V

V. **Variations.** An application shall identify any issued or proposed variations for the copper mine facility pursuant to ~~20.6.2.1210 NMAC~~ and the sections of the copper mine rule affected by the variance(s).

146. It is necessary to add a new Section 20.6.7.31 NMAC to the Copper Mine Rule containing language on variations for copper mine facilities. The rationale for inclusion of variance language in the Copper Mine Rule can be found in 20.6.7.31 NMAC. Deletion of this language is necessary for consistency with the new variance section in 20.6.7.31 NMAC. Olson Testimony WCO Ex. 3, pgs. 49-50.

Section 20.6.7.12

20.6.7.12 ~~RESERVED~~ ADDITIONAL PUBLIC NOTICE REQUIREMENTS:

A. In addition to the public notice requirements of 20.6.2.3108 NMAC, the requirements of this section shall apply to copper mine facilities whose application for a discharge permit, modification or renewal is received by the department after the effective date of the copper mine rule.

B. For an application for a new discharge permit or renewal and modification of an existing discharge permit, instead of the requirement for public notice in Paragraph (2) of Subsection B of 20.6.2.3108 NMAC, the applicant shall provide written notice of the discharge(s) and a copy of the map reference in Subsection J of 20.6.7.11 NMAC by mail to owners of record of all properties within a one-mile distance from the boundary of the property where the discharge site(s) is located. If there are not properties other than properties owned by the discharger within a one-mile distance of the boundary of the property where the copper mining facility is located, the applicant shall provide notice to owners of record of the next nearest properties not owned by the discharger.

C. For an application for a modification of an existing discharge permit, instead of the requirement for public notice in Paragraph (2) of Subsection B of 20.6.2.3108 NMAC, an applicant shall provide written notice of the proposed discharge permit modification and a copy of the map referenced in Subsection J of 20.6.7.11 NMAC by mail to owners of record of all properties within a one-mile distance from the boundary of the discharge site. If there are not properties other than properties owned by the discharger within a one-mile distance of the boundary of the discharge site, the applicant shall provide notice to owners of record of the next nearest properties not owned by the discharger.

D. Applicants for renewal of a discharge permit without modification shall comply with the public notice requirements of Subsection C of 20.6.2.3108 NMAC.

E. Proof of notice required by Subsection D of 20.6.2.3108 NMAC shall include an affidavit of mailing(s) and a list of property owner(s) notified pursuant to Section B of this section.

147. This new section is necessary to create an additional public notice requirement that applies to applications for new discharge permits, applications for renewal of discharge permits that contain discharge permit modifications, and applications for modification of an existing discharge permit received by the Department after the effective date of the copper mine rule. This requirement would not apply to applications for the renewal of an existing discharge permit that does not propose a modification of the existing permit. For these types of discharge permit applications, the radial distance for which the applicant would be required to provide notice would be expanded from the current distance of 1/3 of a mile to a distance of one mile. This expanded distance is necessary, as data available to the Department has shown that ground water contamination at existing copper mine facilities can migrate to distances of greater than 1/3 of a mile. Extensive ground water contaminant migration was shown in an FMI monitoring report for discharge permit DP-484 on tailings pond 7 at the Chino Mine titled “Results of 2011 DP-484, Groundwater Monitoring and Tailings Pond 7 Interceptor Well Field Performance Evaluation, Chino Mines Company, Grant County, New Mexico”. This document shows that sulfate contamination of the shallow aquifer underlying tailings pond 7 extends at least 3,000 feet downgradient of the tailings impoundment. There was also extensive testimony on the extent of ground water contamination resulting from mining operations at the Tyrone Mine presented by the Department during the 24 days of the Commission’s Tyrone Mine Remand Hearings held in 2007. A Department map depicting contaminated aquifer monitoring wells at the Tyrone Mine shows ground water contamination extending approximately 2 miles downgradient of the east side of the Tyrone mine site. Department witness Clint Marshall testified during the hearing that extensive ground water contamination from mining activities has occurred at the Tyrone Mine with a plume of contamination extending for three-and-a-half miles offsite. The leading edge of

the plume of contaminated ground water was about a half mile from Tyrone's own production wells located down in Oak Grove Draw. The Commission recognized factual information regarding extensive ground water contamination in findings of fact in its Tyrone Mine February 4, 2009 "Decision and Order on Remand". Due to the fact that mining generated water contaminants can migrate great distances downgradient from a copper mine facility, it is necessary to have a greater public notice distance in the copper mine rule so that adjacent landowners that could be potentially impacted by a new discharge have knowledge of the proposed permit activities and an opportunity to participate in the permitting process. Olson Testimony WCO Ex. 3, pg. 12; WCO Ex. 13; WCO Ex. 14; WCO Ex. 15, page 11; WCO Ex. 16, page 2945-2946; WCO Ex. 16, page 2946; and WCO Ex. 10, pgs. 8-11, Findings of Fact 27-42.

148. Expanding the public notice distance is also consistent with the notice requirements in the Commission rules for new dairies in the Dairy Rule and under the Commission rules for abatement of water pollution. Under the Dairy Rule in 20.6.6.14 NMAC, new dairies are required to provide public notice of a proposed discharge and a map of the proposed discharge location to property owners within a one-mile distance from the boundary of the property where the discharge site is located. If there are no properties other than properties owned by the discharger within a one-mile distance of the boundary of the property where the dairy facility is located, the applicant must provide notice to owners of record of the next nearest properties not owned by the discharger. Also, under the Commission's rules for "Abatement and Prevention of Water Pollution" in 20.6.2.4108.B(4) NMAC owners and residents of surface property located within one mile from the perimeter of the area that Commission standards have been exceeded are required to be notified of actions related to the filing of a Stage 2 abatement plan proposal to remediate water pollution. Olson Testimony WCO Ex. 3, pgs. 12-13.

Section 20.6.7.17.D(4)

(4) **Short-term impacted stormwater impoundments.** Impacted stormwater impoundments that store impacted stormwater for less than thirty days shall meet the following design and construction requirements; ~~except that any such impoundments located within an open pit surface drainage area may not require a liner.~~

149. It is necessary that the language “*except that any such impoundments located within an open pit surface drainage area may not require a liner*” as proposed by the Department be deleted. Sections III-VI of this Statement of Reasons address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently, an impoundment that may cause an exceedance of Commission standards at any potential “*place of withdrawal*” must implement appropriate pollution prevention measures. Consistent with these findings, this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.17.D(4)

(5) **Non-impacted stormwater impoundments.** Non-impacted stormwater impoundments located ~~outside the open pit surface drainage area~~ over contaminated areas where the water has the potential to infiltrate and produce a leachate that may cause an exceedance of the applicable standards require a liner system designed and installed in accordance with Paragraph (4) this Subsection.

150. It is necessary that the language “*outside the open pit surface drainage area*” as proposed by the Department be deleted. Sections III-VI of this Statement of Reasons address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently, an impoundment that may cause an

exceedance of Commission standards at any potential “*place of withdrawal*” must implement appropriate pollution prevention measures. Consistent with these findings this language must be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.18.F

F. Impoundments.

(1) **New impoundments.** Construction of an impoundment pursuant to a discharge permit issued after the effective date of the copper mine rule shall be performed in accordance with the liner, design, and construction requirements of Subsection D of 20.6.7.17 NMAC.

(2) **Existing impoundments.** An impoundment authorized by a discharge permit issued prior to the effective date of the copper mine rule and in existence on the effective date of the copper mine rule that does not meet the requirements of Paragraph (3) of Subsection D of 20.6.7.17 NMAC may continue to receive process water or impacted stormwater provided the requirements of Subparagraphs (a) and (b) or (c) of this Paragraph are met. ~~or the impoundment is located within the open pit surface drainage area.~~ If the requirements of Subparagraphs (a) and (b) or (c) of this Paragraph are not met, the impoundment shall be replaced or improved in accordance with the liner, design, and construction requirements of Subsection D of 20.6.7.17 NMAC.

(a) Ground water monitoring data from monitoring wells downgradient of the impoundment ~~does not~~ indicates that the impoundment is ~~not~~ functioning as designed.

(b) The impoundment has integrity and is capable of maintaining integrity for its operational life.

(c) The impoundment is covered by a variance. ~~granted pursuant to 20.6.2.1210 NMAC.~~

151. It is necessary that the language “*or the impoundment is located within an open pit surface drainage area*” as proposed by the Department in the first sentence of Paragraph (2) be deleted. Sections III-VI of this Statement of Reasons address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently, an impoundment that may cause an exceedance of Commission standards at any potential “*place of withdrawal*” must implement appropriate

pollution prevention measures or receive a variance. Consistent with these findings, this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

152. It is necessary that the double negative in Subparagraph (2) be deleted as it is confusing and makes it difficult to follow this provision. Brown Testimony Tr. vol. 3, pg. 652, lines 3-24.

153. It is necessary to add a new Section 20.6.7.31 NMAC to the Copper Mine Rule containing language on variances for copper mine facilities. The rationale for inclusion of variance language in the Copper Mine Rule can be found in 20.6.7.31 NMAC. Deletion of the language “*granted pursuant to 20.6.2.1210 NMAC*” in Subparagraph (c) is necessary for consistency with the new variance section in 20.6.7.31 NMAC. Olson Testimony WCO Ex. 3, pgs. 49-50.

Section 20.6.7.20.A

A. Engineering design requirements. At a minimum, the following requirements shall be met in designing leach stockpiles at copper mine facilities unless the applicant or permittee can demonstrate that an alternate design will provide an equal or greater level of containment [and will not result in an exceedance of applicable standards.](#)

154. It is necessary that the language “*and will not result in an exceedance of applicable standards*” be added to this subsection. Sections III-VI of this Statement of Reasons address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation require that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently, an alternate design for a leach stockpile that may cause an exceedance of Commission standards at any potential “*place of withdrawal*” must implement appropriate pollution prevention measures to prevent an exceedance of

Commission standards. Consistent with these findings this language should be added as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.20.A(1)(f)

~~(f) **Alternate design.** An applicant may propose and the department may approve an alternative design for a leach stockpile located within an open pit surface drainage area provided that the stockpile and solution capture systems are designed to maximize leach solution capture considering the site-specific conditions of the open pit, underlying geology and hydrology, and leach solutions will not migrate outside of the open pit surface drainage area.~~

(f) **Alternate design.** An applicant may propose and the department may approve an alternate design for a leach stockpile within an open pit surface drainage area that may cause an exceedance of applicable standards provided:

(i) the proposed leach pad area has been granted a variance pursuant to 20.6.7.31 NMAC;

(ii) the solution capture system is designed to maximize leach solution capture considering the site-specific conditions of the open pit and the underlying geology and hydrology; and

(iii) leach solutions will not migrate outside of the open pit surface drainage area.

155. It is necessary to break out and number the provisions to be considered for approval of an alternate design for readability. It is also necessary to add a provision to the Department's proposed language that provides that the proposed leach pad area be granted a variance prior to consideration and approval by the Department of an alternate design. Olson Testimony WCO Ex. 3, pg. 22.

156. Section 20.6.7.20.A(1)(f) NMAC as proposed by the Department is designed to administratively allow the approval of an unlined system for a leach stockpile within the open pit of a copper mine. Leach stockpiles are intentional discharges that generate highly acidic metal-laden leachates shown to cause contamination of ground water in excess of Commission water quality standards. These facts have been presented to the Commission by the Department in prior hearings on the Tyrone Mine in 2007 and were undisputed findings of facts adopted by the Commission in their February 4, 2009 Tyrone Mine Decision and Order on Remand. During the Copper Rule Advisory Committee meetings in 2012, all parties acknowledged the high potential

for ground contamination from leach stockpiles and Freeport along with GRIP/TRP proposed a double liner system for containment of fluids from leach stockpiles as set out in 20.6.7.20.A NMAC. Olson Testimony WCO Ex. 3, pg. 22; WCO Ex. 15, pg. 11; WCO Ex. 16, pgs. 2939-2946; and WCO Ex. 10, pgs. 8-11.

157. The language for Section 20.6.7.20.A(1)(f) NMAC as proposed by the Department does not give any consideration as to whether site-specific engineering or technological controls, including some type of a liner system, could be implemented inside the open pit to prevent contamination of underlying ground water. The Department's proposed language also does not give the public the opportunity to address site specific issues for varying from the engineering controls set out in the copper mine rule. The purpose of the discharge permits is to prevent water pollution consistent with the Water Quality Act statutory requirements of 74-6-4(E) NMSA 1978. Existing leach stockpiles have caused extensive contamination of ground water and accordingly alternate designs of new leach stockpile operations should have to receive a variance to be allowed to intentionally cause water pollution consistent with the statutory requirements of 74-6-4(H) NMSA 1978 including the holding of a public hearing. Olson Testimony WCO Ex. 3, pg. 22

158. The Department's approach in this language is also not consistent with the Tyrone Agreement and its recent amendment, both of which were approved by the Commission. The Tyrone Agreement sets out a procedure for new facilities, such as a leach stockpile whereby the Tyrone Mine must employ full technological controls to prevent ground water pollution. Tyrone may construct a new facility that does not include full technological controls only if the new facility meets the following three conditions: 1) it will be constructed in an open pit within an Open Pit Surface Drainage Area; 2) the new facility is constructed in an area with existing ground

water contamination above applicable standards at the time construction begins; and 3) the new facility is constructed in an area that is covered by a variance that has been approved in accordance with the Commission's regulations. With the exception of condition 1, these factors, which have been approved by the Commission, have not been incorporated into the language as proposed by the Department. Olson Testimony WCO Ex. 3, pg. 22; WCO Ex. 11, pgs. 12-13; and WCO Ex. 17.

159. In order to provide for consistency with the statutory requirements of the Water Quality Act, the Tyrone Agreement as approved by the Commission, and to give the public an opportunity to address site-specific issues related to water pollution from existing facilities, a variance requirement for alternate designs that may pollute ground water should be included in Section 20.6.7.20.A(1)(f) NMAC. New Section 20.6.7.31 NMAC provides additional rationale in support of the need for variances for copper mine facilities that addresses site specific factors to be considered in order to approve new facilities that will intentionally cause an exceedance of Commission water quality standards. Olson Testimony WCO Ex. 3, pg. 22.

Section 20.6.7.20.B(2)

(2) **Existing leach stockpiles.** A leach stockpile system ~~, including its associated solution collection or containment system,~~ at a copper mine facility in existence and subject to a discharge permit on the effective date of the copper mine rule is not required to meet the design and construction requirements of Subsection A of 20.6.7.20 NMAC and may continue to operate as previously ~~authorized permitted~~ under a discharge permit if the permittee: subject to compliance with the contingency requirements of 20.6.30 NMAC. A permit issued for such an existing leach stockpile system after the effective date of the copper mine rule may include the conditions of the existing discharge permit, which shall not be considered to be additional conditions.

(a) obtains a variance pursuant to 20.6.7.31 NMAC;

(b) implements measures during operations, as approved by the department, to control, contain, and mitigate the sources and extent of any water pollution above applicable standards to the maximum extent practicable;

(c) abates any water pollution above applicable standards consistent with the requirements of 20.6.2.4101, 20.6.2.4103, 20.6.2.4106, 20.6.2.4107, 20.6.2.4108 and 20.6.2.4112 NMAC; and

(d) does not expand the area authorized for discharge as set forth in the existing discharge permit.

160. In the first sentence of Paragraph (2) the language “subject to compliance with the contingency requirements of 20.6.30 NMAC” as proposed by the Department should be deleted. This language is unnecessary and could create confusion in the application of the rule. The requirements of Section 30 are stand-alone contingency requirements that must be complied when certain unpermitted events occur, such as discovery of water pollution in excess of Commission standards, unauthorized discharges or spills, and various types of unpermitted activities. The contingency requirements of Section 30 clearly specify when and where they apply. The Department’s proposed language could create confusion about whether specific facilities are subject to the contingency requirements of 20.6.7.30 NMAC. Olson Testimony WCO Ex. 3, pg. 23.

161. It is necessary to add a provision requiring a variance to existing facilities that will continue operate and pollute ground water in excess of Commission standards. As written, the Department’s proposed language effectively creates a blanket exemption for existing leach stockpiles that have caused ground water contamination in excess of Commission standards to continue operating and authorizes pollution to continue by rule. This approach does not consider whether specific best management practices could be implemented to reduce contamination that is occurring and without giving the public the opportunity to address site-specific issues at a hearing. The purpose of the discharge permits is to prevent water pollution consistent with the statutory requirements of the Water Quality Act in 74-6-4(E) NMSA 1978. Existing leach stockpiles have caused contamination in violation for their discharge permits issued to prevent water pollution according to Commission rules. Accordingly, these operations must receive a

variance to continue operating consistent with the statutory requirements of 74-6-4(H) NMSA 1978 including the holding of a public hearing. The Department's approach in this language is also not consistent with the Tyrone Agreement and its recent amendment, both of which were approved by the Commission. The Tyrone Agreement sets out a procedure for existing facilities, such as a leach stockpile, that is causing ground water contamination in excess of applicable standards where Tyrone may seek a variance for the facility while it is in operation. In the Tyrone Agreement, the Department may recommend approval of a variance request provided that:

a) Tyrone must demonstrate that ground water pollution from the facility will be abated to meet applicable standards following closure.

b) Tyrone must demonstrate that it is technically and economically infeasible to prevent ground water contamination above applicable standards during operation of the facility.

c) Tyrone must implement measures to control the source and extent of contamination to the maximum extent practicable consistent with current discharge permit terms and conditions.

d) Tyrone must fully contain ground water contamination from the facility consistent with current discharge permit terms and conditions.

e) Tyrone must not expand the authorized footprint of the facility during operation without a permit modification.

These factors are not incorporated into the language as proposed by the Department. Olson Testimony WCO Ex. 3, pg. 23; WCO Ex. 11, pgs. 13-14; and WCO Ex. 17;

162. In order to provide for consistency with the statutory requirements of the Water Quality Act, the Tyrone Agreement as approved by the Commission, and to give the public an opportunity to address site-specific issues related to water pollution from existing facilities,

variance language for these types of facilities should be included in this paragraph. New Section 20.6.7.31 NMAC provides additional rationale in support of the need for variances for copper mine and the site-specific factors that should be addressed for continued operation of existing facilities that have caused exceedances of Commission water quality standards. Olson Testimony WCO Ex. 3, pg. 23.

Section 20.6.7.21.A.(1)(d)

(d) If the results of static testing indicate that a material may be acid generating and/or may generate a leachate containing water contaminants, a kinetic testing program to evaluate reaction rates, provide data to estimate drainage quality, the lag time to acidification of the material, and primary weathering and secondary mineral precipitation/dissolution as it may affect acidification, neutralization and drainage quality. The length of and/or means of determining when kinetic tests will be discontinued shall be approved by the department prior to implementation of the kinetic testing program. If a liner system is proposed for storage or disposal of waste rock pursuant to ~~Subparagraph (d) of~~ Paragraph (1) of Subsection B of this ~~s~~Section, a kinetic testing program is not required.

163. Amendments to Subsection B of 20.6.7.21 NMAC eliminate the language of Subparagraph (d) of Paragraph 1 of 20.6.7.21 NMAC as proposed by the Department. Therefore, this reference is deleted consistent with that amendment. The findings of fact on Subsection B of this section contain a more detailed explanation of the rationale for the deletion of this language. Olson Testimony WCO Ex. 3, pg. 25.

Section 20.6.7.21.A(2)(e)

(e) if the results of the static testing or kinetic testing indicate that the material ~~may will~~ be acid generating and/or ~~may~~ generate a leachate containing water contaminants, ~~and the materials will be placed outside of an open pit surface drainage area,~~ a plan shall be submitted to the department to evaluate whether discharges of leachate from the stockpile may cause an exceedance of applicable standards, including an evaluation of the geologic and hydrologic area where the material is to be stored. The plan shall include either a department approved model or a monitored, large-scale field testing program. If a liner system is proposed for storage or disposal of waste rock pursuant to Paragraph (1) of Subsection B of this Section, an evaluation of whether a leachate may cause an exceedance of applicable standards is not required.

164. It is necessary to delete the language “*and the materials will be placed outside of an open pit surface drainage area*” as proposed by the Department and amend the language of the first sentence as shown above. The purpose of a material handling plan is to govern waste rock generation and its disposal by determining which materials require special handling to prevent acid mine drainage or leachate from the waste rock causing an exceedance of applicable standards in ground water. Material characterization and handling is necessary to determine the ultimate disposal location whether it is inside or outside the open pit. The language as proposed by the Department is also confusing considering that the Department’s proposed engineering design criteria in 20.6.7.21.B NMAC does not require any special placement or handling of waste rock to prevent ground water pollution, and specifically allows for intentional ground water contamination from waste rock stockpiles to occur by rule. In addition the Department proposed language allows for water pollution by rule within the open pit without a variance as discussed in findings for amendment of 20.6.7.20.A(1)(f) NMAC and 20.6.7.21.B NMAC. Therefore, in order to clarify the purpose of the material characterization and handling plan is to prevent pollution, the above-proposed deletions and additions to the Department proposed language should be made. Olson Testimony WCO Ex. 3, pgs. 25-26.

165. It is also necessary to add the language “*If a liner system is proposed for storage or disposal of waste rock pursuant to Paragraph (1) of Subsection B of this Section, an evaluation of whether a leachate may cause an exceedance of applicable standards is not required.*” to the Department proposed language. This language is necessary for consistency with amendments to the waste rock engineering design language in 20.6.7.21.B NMAC and will reduce the burden on the permittee for conducting technical evaluations for placement of waste rock in lined facilities. Olson Testimony WCO Ex. 3, pg. 26.

Section 20.6.7.21.B(1)&(2)

(1) ~~New waste rock stockpiles located outside an open pit surface drainage area.~~ New waste rock stockpiles ~~that may generate water contaminants or acid rock drainage that may cause an exceedance of applicable standards, as determined through a material characterization and handling plan pursuant to Subsection A of this section, located outside an open pit surface drainage area~~ shall meet the following requirements, unless the applicant or permittee can demonstrate that an alternate design will provide an equal or greater level of containment and will not result in an exceedance of applicable standards; has been granted a variance pursuant to 20.6.7.31 NMAC; or can demonstrate that the waste rock stockpile will not cause an exceedance of applicable standards at any place of withdrawal of water for present or reasonably foreseeable future use pursuant to 20.6.7.33.D(2) NMAC.

(a) **Liner system.** A new waste rock stockpile shall be placed on an engineered liner system consisting of a compacted subbase overlain by a synthetic liner, which is overlain, by a solution collection system designed to transmit process fluids out of the waste rock stockpile. The liner system shall be installed in accordance with a department approved CQA/CQC plan pursuant to Paragraph (1) of Subsection C of 20.6.7.15 NMAC

(b) **Liner system subbase.** A liner system subbase shall be prepared and placed upon a stable subgrade. The prepared subbase shall consist of a minimum of 12 inches of soil that has a minimum re-compacted in-place coefficient of permeability of 1×10^{-6} cm/sec. The top surface of the subbase shall be smooth and free of sharp rocks or any other material that could penetrate the overlying synthetic liner.

(c) **Liner type.** A synthetic liner for a new waste rock stockpile shall provide the same or greater level of containment, including permeability, as a 60-mil HDPE geomembrane liner system. The liner system's tensile strength, tear and puncture resistance and resistance to degradation by ultraviolet light shall be compatible with design loads, exposures and conditions. A licensed New Mexico professional engineer with experience in liner system construction and installation shall identify the basis for the geomembrane composition and specific liner based upon:

(i) the type, slope and stability of the subgrade;
(ii) the overliner protection and provisions for hydraulic relief within the liner system;

(iii) the load and the means of applying the load on the liner system;
(iv) the compatibility of the liner material with process solutions applied to the waste rock stockpile and temperature extremes of the location at which it will be installed; and

(v) the liner's ability to remain functional for five years after the operational life of the waste rock stockpile.

(d) **Solution collection system.** A solution collection system shall be constructed in an overliner protection and drainage system. The solution collection system shall be designed to remain functional for five years after the operational life of the waste rock stockpile. The overliner protection shall be designed and constructed to protect the synthetic liner from damage during loading and minimize the potential for penetration of the synthetic liner. A sloped collection system shall be designed that will transmit fluids out of the waste rock stockpile for management and/or disposal in accordance with the copper mine rule. The collection system shall be designed to freely drain fluids as they collect on the liner such that

there is minimal hydraulic head maintained on the liner. Any penetration of the liner by the collection system through which a pipe or other fixture protrudes shall be constructed in accordance with the liner manufacturer's requirements. Liner penetrations shall be detailed in the construction plans and as-built drawings.

~~(a) Stormwater run-on shall be diverted and/or contained to minimize contact between stormwater run-on and the stockpiled material.~~

~~(b) Seepage from the sides of a waste rock stockpile shall be captured and contained through the construction of headwalls, impoundments and diversion structures as applicable.~~

~~(c) Ground water impacted by waste rock stockpiles in excess of applicable standards shall be captured and contained through the construction of interceptor systems as applicable.~~

~~(d) The applicant shall submit design plans signed and sealed by a qualified licensed New Mexico professional engineer along with a design report that includes the following:~~

~~(i) the proposed areal extent and configuration of the waste rock stockpile;~~

~~(ii) the topography of the site where the waste rock stockpile will be located;~~

~~(iii) the geology of the site;~~

~~(iv) the design of waste rock stockpile seepage collection systems, to be proposed based on consideration of site-specific conditions;~~

~~(v) the design of stormwater diversion structures to minimize contact between stormwater run-on and the waste rock material. The design shall consider the amount, intensity, duration and frequency of precipitation; watershed characteristics including the area, topography, geomorphology, soils and vegetation of the watershed; and run-off characteristics of the watershed including the peak rate, volumes and time distribution of run-off events.~~

~~(vi) an aquifer evaluation to determine potential impacts to ground water from the waste rock stockpile based on the proposed waste rock stockpile design and geochemical characteristics. The aquifer evaluation shall include a complete description of aquifer characteristics and hydrogeologic controls on the movement of leachate from the waste rock stockpile and ground water impacted by the waste rock stockpile based on actual field data.~~

~~(vii) a design report for a proposed interceptor system for containment and capture of ground water impacted by the waste rock stockpile. The design report shall include, at a minimum construction drawings and interceptor system performance information, recommended equipment including pumps and meters, recommended pump settings and pumping rates, methods for data collection, and a demonstration that the permittee has adequate water rights to operate the system as designed. The design report shall include a demonstration that the interceptor system design will capture ground water impacted by the waste rock stockpile such that applicable standards will not be exceeded at monitor well locations specified by 20.6.7.28 NMAC. The interceptor well system shall be designed to maximize capture of impacted ground water and minimize the extent of ground water impacted by the waste rock stockpile.~~

~~(viii) within 120 days of completion of seepage collection and interceptor system construction a final report shall be submitted to the department that includes complete as-~~

~~built drawings and a summary of how the items in 20.6.7.22A.(4)(a)(i) thru 20.6.7.22A.(4)(a)(vii) were incorporated into the design.~~

~~—————(b) If the permittee or the department determine that the proposed waste rock stockpile, seepage collection and interceptor systems, when operated in accordance with the design plan specified in this Paragraph, would cause ground water to exceed applicable standards at monitoring well locations specified by 20.6.7.28 NMAC, the applicant may propose, or the department may require additional controls including but not limited to a liner system as additional conditions in accordance with 20.6.7.10.H NMAC.~~

~~—————(2) **New waste rock stockpiles located inside an open pit surface drainage area.** Stormwater run-on shall be diverted or contained to minimize contact between stormwater run-on and the stockpiled material.~~

166. Waste rock stockpiles can generate highly acidic leachate containing water contaminants that have the potential to cause ground water pollution in excess of Commission water quality standards. These facts have been presented to the Commission by the Department in prior hearings on the Tyrone Mine in 2007 and were findings of fact adopted by the Commission in its February 4, 2009 Tyrone Mine Decision and Order on Remand. During the Copper Rule Advisory Committee meetings in 2012, all parties acknowledged the potential for ground contamination to occur from acid mine drainage from waste rock stockpiles and provided technical information to the Department in support of the waste characterization and material handling portion of the copper mine rule found in 20.6.7.21.A NMAC. Olson Testimony WCO Ex. 3, pg. 28; WCO Ex. 15, page 11; WCO Ex. 16, pgs. 2939-2946; and WCO Ex. 10, pages 8-10.

167. The Department's proposed engineering design criteria in Paragraphs (1) and (2) of 20.6.7.21.B NMAC violates the Water Quality Act and is inconsistent with other Commission rules and historical practice because it does not prevent pollution of ground water from waste rock stockpiles. Statutory pollution prevention requirements, existing Commission Rules and historical practices are discussed in detail in the Findings of Fact in Sections III-V of this Statement of Reasons which shows that the Department approach to allow pollution of ground

water by rule is contrary to the statutory and regulatory provisions as well as the historical application of the Water Quality Act and Commission rules. Olson Testimony WCO Ex. 3, pg. 28.

168. The Department's proposed rule does not require any special placement or handling of waste rock, such as placement in a lined facility, to prevent pollution of ground water. The rule as proposed by the Department specifically authorizes pollution by allowing acid mine drainage to leach from waste rock and pollute ground water. The language for this paragraph as proposed by the Department does not make any consideration as to whether site-specific engineering or technological controls, including some type of a liner or other system, could be implemented to prevent contamination of underlying ground water. The Department proposed language also does not give the public the opportunity to address site specific issues for varying from the engineering controls set out in the copper mine rule. The purpose of the discharge permits is to prevent water pollution consistent with the Water Quality Act statutory requirements of 74-6-4(E) NMSA 1978. As discussed above, waste rock stockpiles have caused contamination and accordingly must receive a variance to be allowed to intentionally cause water pollution consistent with the statutory requirements of 74-6-4.H NMSA 1978, including the holding of a public hearing. Olson Testimony WCO Ex. 3, pg. 28.

169. As proposed, the rule in Subparagraph (d) of Paragraph (1) places the burden of proof on the Department to demonstrate pollution will occur in order to prevent it contrary to the intended purpose of Commission rules. If the Department then demonstrates that contamination has occurred, it is not clear how the rule contemplates abatement, which according to the permit modification provision of 20.6.2.3109.E NMAC would provide for abatement of water pollution at any "*place of withdrawal*". Essentially, the permittee would be allowed to pollute water then

be required to abate the water pollution to protect a “*place of withdrawal*” after it occurs. Olson Testimony WCO Ex. 3, pg. 28; and WCO Ex. 10, pg. 14, paragraph 52.

170. The Department’s approach in this language is not consistent with the Tyrone Agreement and its recent amendment, both of which were approved by the Commission. The Tyrone Agreement sets out a procedure for new facilities, such as a waste rock stockpile, whereby Tyrone must employ full technological controls to prevent ground water pollution. Tyrone may construct a new facility that does not include full technological controls only if the new facility meets the following three conditions: 1) it will be constructed in an open pit within an Open Pit Surface Drainage Area; 2) the new facility is constructed in an area with existing ground water contamination above applicable standards at the time construction begins; and 3) the new facility is constructed in an area that is covered by a variance that has been approved in accordance with the Commission’s regulations. With the exception of condition 1 of these Commission approved factors, these issues have not been considered in the language as proposed by the Department. Olson Testimony WCO Ex. 3, pg. 28; WCO Ex. 11, pages 12-13; and WCO Ex. 17.

171. Based on the above findings, the language proposed by the Department should be amended as shown above. To address the deficiencies it is necessary that the amended language shown above be adopted. The amended provisions require installation of a liner system similar to that proposed rule for a leach stockpile system in the case that a material characterization and handling plan indicates that the waste rock may cause an exceedance of applicable standards. No liner would be required otherwise. The amended language also provides a mechanism for alternate designs from the liner requirement through a variance process consistent with the Water Quality Act and Commission rules. The amended language is based upon the Department

language in its August 17, 2012 draft rule as presented to the Copper Rule Advisory Committee. Olson Testimony WCO Ex. 3, pg. 29.

172. In order to provide for consistency with the statutory requirements of the Water Quality Act, existing Commission rules, historical precedent in the implementation of the Water Quality Act and Commission rules, the Tyrone Agreement as approved by the Commission, and to give the public an opportunity to address site-specific issues related to water pollution from existing facilities, it is necessary to include the above language in this section. New amended section 20.6.7.31 NMAC provides additional information on the need for variances for copper mines facilities that address site specific factors that must be considered in order to approve new facilities that will intentionally cause an exceedance of Commission water quality standards.

Olson Testimony WCO Ex. 3, pg. 29.

Section 20.6.7.21.C(2)

C. Construction.

(1) **New waste rock stockpiles.** Construction of a new waste rock stockpile shall be performed in accordance with the applicable engineering requirements of Subsection B of 20.6.7.21 NMAC and 20.6.7.17 NMAC.

(2) **Existing waste rock stockpiles.** A waste rock stockpile in existence and subject to a discharge permit on the effective date of the copper mine rule is not required to meet the design and construction requirements of Subsection B of 20.6.7.21 NMAC and may continue to operate as previously authorized permitted under a discharge permit if the permittee; unless ground water monitoring of the stockpile pursuant to 20.6.7.28 NMAC requires implementation of corrective action under Subsection A of 20.6.7.30 NMAC.

(a) obtains a variance pursuant to 20.6.7.31 NMAC;

(b) implements measures during operations, as approved by the department, to control, contain, and mitigate the sources and extent of any water pollution above applicable standards to the maximum extent practicable;

(c) abates any water pollution above applicable standards consistent with the requirements of 20.6.2.4101, 20.6.2.4103, 20.6.2.4106, 20.6.2.4107, 20.6.2.4108 and 20.6.2.4112 NMAC; and

(d) does not expand the area authorized for discharge set forth in the existing discharge permit.

A permit issued for an existing waste rock stockpile system after the effective date of the copper mine rule may include the conditions of the existing discharge permit, which shall not be considered to be additional conditions.

173. For the reasons discussed regarding Section 20.6.7.20.B.(2) NMAC, in order to provide for consistency with the statutory requirements of the Water Quality Act, the Tyrone Agreement as approved by the Commission, and to give the public an opportunity to address site-specific issues related to water pollution from existing facilities, variance language for these types of facilities should be included in this paragraph. New Section 20.6.7.31 NMAC provides additional rationale in support of the need for variances for copper mine and the site-specific factors that must be addressed for continued operation of existing facilities that have caused exceedances of Commission water quality standards. Olson Testimony WCO Ex. 3, pgs. 29-30; and Findings of Fact 160-162 of this Statement of Reasons.

Section 20.6.7.22.A

A. Engineering design requirements. At a minimum, the following requirements shall be met in designing crushing, milling, concentrating, smelting and tailings facilities at copper mine facilities unless the applicant or permittee can demonstrate that an alternate design will provide an equal or greater level of containment and will not result in an exceedance of applicable standards; has been granted a variance pursuant to 20.6.7.31 NMAC; or can demonstrate that the unit will not cause an exceedance of applicable standards at any place of withdrawal of water for present or reasonably foreseeable future use pursuant to 20.6.7.33.D(2) NMAC.

174. For the reasons discussed regarding Section 20.6.7.20.B.(2) NMAC, in order to provide for consistency with the statutory requirements of the Water Quality Act, the Tyrone Agreement as approved by the Commission, and to give the public an opportunity to address site-specific issues related to water pollution from existing facilities, variance language for these types of facilities should be included in this paragraph. New Section 20.6.7.31 NMAC provides additional rationale in support of the need for variances for copper mine and the site-specific factors that should be addressed for continued operation of existing facilities that have caused

exceedances of Commission water quality standards. Olson Testimony WCO Ex. 3, pgs. 29-30; and Findings of Facts 160-162 of this Statement of Reasons.

Section 20.6.7.22.A(1)

(1) **New crushing and milling facilities.** New crushing and milling facilities, including associated ore storage, ~~except when located within the open pit surface drainage area,~~ shall be designed to contain and manage all materials containing water contaminants that have the potential to migrate to ground water and cause an exceedance of applicable standards on concrete or low permeability surfaces approved by the department.

175. It is necessary that the language “*except when located within an open pit surface drainage area*” as proposed by the Department be deleted. Sections III-VI of this Statement of Reasons address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation require that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently, a facility that may cause an exceedance of Commission standards at any potential “*place of withdrawal*” must implement appropriate pollution prevention measures. Consistent with these findings this language must be must be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.22.A(4)

(4) **New tailings impoundments.** Tailings impoundments shall be designed according to the following requirements. The department may require additional engineering containment systems if the system is to be installed in an area of fractured or faulted geologic conditions, inadequately abandoned exploratory boreholes underlying the site of the installation, or where the depth to ground water underlying the structure is less than 100 feet as additional conditions in accordance with Subsection H of 20.6.7.10 NMAC.

(a) **Liner system.** A new tailings impoundment shall be placed on an engineered liner system consisting of a compacted subbase overlain by a synthetic liner, which is designed to drain fluids out of the tailings impoundment. The liner system shall be approved by the department prior to installation and shall be installed in accordance with a department approved CQA/CQC plan pursuant to 20.6.7.15.C(1)(b) NMAC.

(b) **Liner system subbase.** A liner system subbase shall be prepared and placed upon a stable foundation. The prepared subbase shall consist of 12 inches soil that has a minimum re-compacted in-place coefficient of permeability of 1×10^{-6} cm/sec. The subbase shall be compacted in lifts that are no more than six inches thick. The top surface of the subbase shall be smooth and free of sharp rocks or any other material that could penetrate the overlying synthetic liner.

(c) **Liner type.** A synthetic liner for a tailings impoundment shall provide the same or greater level of containment, including permeability, as a 60-mil HDPE geomembrane liner system. The liner system's tensile strength, tear and puncture resistance and resistance to degradation by ultraviolet light shall be compatible with design loads, exposures and conditions. A qualified licensed New Mexico professional engineer with experience in liner system construction and installation shall identify the basis for the geomembrane composition and specific liner based upon:

- _____ (i) the type, slope and stability of the subgrade;
- _____ (ii) the overliner protection and provisions for hydraulic relief within the liner system;
- _____ (iii) the load and the means of applying the load on the liner system;
- _____ (iv) the compatibility of the liner material with process solutions applied to the impoundment and temperature extremes of the location at which it will be installed; and
- _____ (v) the liner's ability to remain functional for five years after the operational life of the impoundment.

(d) **Drainage collection system.** A drainage collection system shall be installed to collect solutions drained from the liner system for management of fluids for reuse and/or disposal. The drainage collection system shall be designed to remain functional until five years after the operational life of the impoundment. The drainage system shall be designed to freely drain fluids as they collect on the liner such that there is minimal hydraulic head maintained on the liner. Any penetration of the liner by the collection system through which a pipe or other fixture protrudes shall be constructed in accordance with the liner manufacturer's requirements. Liner penetrations shall be detailed in the construction plans and as-built drawings.

_____ (a) — Stormwater run-on shall be diverted and/or contained to minimize contact between stormwater run-on and the tailing material.

_____ (b) — Seepage from the sides of a tailing impoundment shall be captured and contained through the construction of headwalls, impoundments and diversion structures as applicable.

_____ (c) — Ground water impacted by the tailing impoundment in excess of applicable standards shall be captured and contained through the construction of interceptor systems as applicable.

_____ (d) — The applicant shall submit design plans signed and sealed by a licensed New Mexico professional engineer along with a design report that includes the following:

- _____ (i) — the annual volumes and daily maximum design rates of tailings or other discharge approved by the department to be deposited in the impoundment;
- _____ (ii) — the topography of the site where the impoundment will be located;
- _____ (iii) — the geology of the site;
- _____ (iv) — the design footprint of the tailing impoundment;

~~—— (v) the design of tailing seepage collection systems, to be proposed based on consideration of site specific conditions;~~

~~—— (vi) the design of stormwater diversion structures to minimize contact between stormwater run on and the tailing material. The design shall consider the amount, intensity, duration and frequency of precipitation; watershed characteristics including the area, topography, geomorphology, soils and vegetation of the watershed; and run-off characteristics of the watershed including the peak rate, volumes and time distribution of run-off events.~~

~~—— (vii) an aquifer evaluation to determine potential impacts on ground water from the tailings impoundment based on the proposed tailings impoundment design. The aquifer evaluation shall include a complete description of aquifer characteristics and hydrogeologic controls on movement of tailing drainage and ground water impacted by the tailings impoundment.~~

~~—— (viii) a design report for a proposed interceptor system for containment and capture of ground water impacted by the tailings impoundment. The design report shall include, at a minimum construction drawings and interceptor system performance information, recommended equipment including pumps and meters, recommended pump settings and pumping rates, methods for data collection, and a demonstration that the permittee has adequate water rights to operate the system as designed. The design report shall include a demonstration that interceptor system design will capture ground water impacted by the tailings impoundment such that applicable standards will not be exceeded at monitoring well locations specified by 20.6.7.28 NMAC. The interceptor system shall be designed to maximize capture of impacted ground water and minimize the extent of ground water impacted by the tailings impoundment.~~

~~—— (ix) within 120 days of seepage collection and interceptor well system construction a final report shall be submitted to the department that includes complete as built drawings and a summary of how the items in 20.6.7.22A.(4)(a)(i) thru 20.6.7.22A.(4)(a)(vii) were incorporated into the design.~~

~~—— (e) If the permittee or the department determines that the proposed tailings impoundment, seepage collection and interceptor systems, when constructed and operated in accordance with the design plan specified in this Paragraph, would cause ground water to exceed applicable standards at monitoring well locations specified by 20.6.7.28 NMAC, the permittee may propose, or the department may require additional controls, including but not limited to, a liner system as additional conditions in accordance with Subsection I of 20.6.7.10 NMAC.~~

176. Tailing impoundments are large-scale facilities and contain water contaminants that have the potential to cause ground water pollution in excess of Commission water quality standards. These facts have been presented to the Commission by the Department in prior hearings on the Tyrone Mine in 2007 and were adopted as findings of fact by the Commission in their February 4, 2009 Tyrone Mine Decision and Order on Remand. During the Copper Rule Advisory Committee meetings in 2012, all parties acknowledged the potential for ground

contamination to occur from tailing impoundments. Olson Testimony WCO Ex. 3, pg. 32; WCO Ex. 15, pgs. 9-10; and WCO Ex. 10, pgs. 8-10.

177. The Department's proposed engineering design criteria in Paragraphs (4) of 20.6.7.22.A NMAC violates the Water Quality Act and is inconsistent with other Commission rules and historical practice because it does not prevent pollution of ground water from tailing impoundments. Statutory pollution prevention requirements, existing Commission Rules and historical practices are discussed in detail in the Findings of Fact in Sections III-V of this Statement of Reasons which shows that the Department approach to allow pollution of ground water by rule is contrary to the statutory and regulatory provisions as well as the historical application of the Water Quality Act and Commission rules. Olson Testimony WCO Ex. 3, pg. 32; and Findings of Fact 9-46 of this Statement of Reasons.

178. The Department's proposed rule does not require any special placement or handling of tailing, such as placement in a lined facility, to prevent pollution of ground water. The rule as proposed by the Department specifically authorizes pollution by allowing acid mine drainage to leach from tailing and pollute ground water. The language for this paragraph as proposed by the Department does not make any consideration as to whether site-specific engineering or technological controls, including some type of a liner or other system, could be implemented to prevent contamination of underlying ground water. The Department proposed language also does not give the public the opportunity to address site specific issues for varying from the engineering controls set out in the copper mine rule. The purpose of the discharge permits is to prevent water pollution consistent with the Water Quality Act statutory requirements of 74-6-4(E) NMSA 1978. As discussed above, tailing impoundments have caused contamination and accordingly must receive a variance to be allowed to intentionally cause water pollution

consistent with the statutory requirements of 74-6-4(H) NMSA 1978, including the holding of a public hearing. Olson Testimony WCO Ex. 3, pg. 32.

179. As proposed, the rule in Subparagraph (d) of Paragraph (1) places the burden of proof on the Department to demonstrate pollution will occur in order to prevent it contrary to the intended purpose of Commission rules. If the Department then demonstrates that contamination has occurred, it is not clear how the rule contemplates abatement, which according to the permit modification provision of 20.6.2.3109.E NMAC would provide for abatement of water pollution at any “place of withdrawal”. Essentially, the permittee would be allowed to pollute water then be required to abate the water pollution to protect a “*place of withdrawal*” after it occurs. Olson Testimony WCO Ex. 3, pg. 32; and WCO Ex. 10, pg. 14, paragraph 52.

180. The Department’s approach in this language is not consistent with the Tyrone Agreement and its recent amendment, both of which were approved by the Commission. The Tyrone Agreement sets out a procedure for new facilities, such as a tailing impoundment, whereby Tyrone must employ full technological controls to prevent ground water pollution. Tyrone may construct a new facility that does not include full technological controls only if the new facility meets the following three conditions: 1) it will be constructed in an open pit within an Open Pit Surface Drainage Area; 2) the new facility is constructed in an area with existing ground water contamination above applicable standards at the time construction begins; and 3) the new facility is constructed in an area that is covered by a variance that has been approved in accordance with the Commission’s regulations. With the exception of condition 1 of these Commission approved factors, these issues have not been incorporated into the language as proposed by the Department. Olson Testimony WCO Ex. 3, pg. 32; WCO Ex. 11, pages 12-13; and WCO Ex. 17.

181. The Department does not take into consideration the fact that it is feasible to construct lined tailing impoundment facilities. As discussed in Findings of Fact 101-110 of this Statement of Reasons it is technically feasible to construct a lined tailing impoundment facility. New Mexico Copper Corporation is proposing to reopen the Copper Flats Mine near Hillsboro, New Mexico. New Mexico Copper was a member of the Copper Rule Advisory Committee (CRAC) and Copper Rule Technical Committee (CRTC). On May 3, 2012, New Mexico Copper made a technical presentation to the CRTC of their proposed engineering design for a tailing impoundment that included a liner system. This presentation on engineering design is similar to New Mexico Copper's proposed lined tailing impoundment design contained in operation plans submitted to the State of New Mexico Mining and Minerals Division, the Department, and the Bureau of Land Management. Construction of lined facilities that prevent water pollution are feasible and practical and protect limited ground water supplies in New Mexico. Olson Testimony WCO Ex. 3, pg. 33; and WCO Ex. 12, Appendix D, pgs. 6-7 and drawings 1-9.

182. Even after publication of the Department's proposed Copper Mine Rule, New Mexico Copper is continuing to plan for use of an engineered composite liner system for disposal tailings at their tailings storage facility. This design was proposed before the proposed Copper Mine Rule was developed. Diechmann Testimony Tr. vol. 8, pg. 2073, line 23-25 and pg. 2074, line 1-4.

183. Based on the above findings and in order to provide for consistency with the statutory requirements of the Water Quality Act, existing Commission rules, historical precedent in the implementation of the Water Quality Act and Commission rules, the Tyrone Agreement as approved by the Commission, and to give the public an opportunity to address site-specific issues related to water pollution from existing facilities, the language proposed by the Department

should be amended as shown above. The amended provisions require installation of a liner system similar to that proposed rule for a leach stockpile system. The amended language also provides a mechanism for alternate designs from the liner requirement through a variance process consistent with the Water Quality Act and Commission rules. The amended language is based upon the Department language in its August 17, 2012 draft rule as presented to the Copper Rule Advisory Committee. Olson Testimony WCO Ex. 3, pg. 33.

Section 20.6.7.22.A(5)

(5) **New dry stack tailing piles.** New dry stack tailings piles ~~located outside an open pit surface drainage area~~ shall comply with the material characterization, engineering design, construction, and operational requirements of 20.6.7.21 NMAC, as applicable.

184. Dry stack tailings are similar to waste rock stockpiles in that they have the potential to generate water contaminants that may leach and cause water pollution in excess of Commission standards. It is necessary to delete the language “*and the materials will be placed outside of an open pit surface drainage area*” as proposed by the Department and amend the language of the first sentence as shown above. The purpose of a material characterization and handling plan is to govern waste generation and its disposal by determining which materials require special handling to prevent leachate from the tailings causing an exceedance of applicable standards in ground water. Material characterization and handling is necessary to determine the ultimate disposal location whether it is inside or outside the open pit. The Department proposed language allows for water pollution by rule within the open pit without a variance as discussed in findings for amendment of 20.6.7.20.A(1)(f) NMAC and 20.6.7.21.B NMAC. In addition, Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation require that ground water pollution in excess of

Commission standards be prevented at any “*place of withdrawal*” unless a variance is obtained.

Consistent with these findings this language must be should be deleted as shown above.

Therefore, in order to clarify that the purpose of the material handling plan is to prevent water pollution, the above proposed deletions and additions to the Department proposed language should be made. Olson Testimony WCO Ex. 3, pgs. 25-26; and Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.22.B(2)

(2) **Existing crushing, milling, concentrating, smelting or tailings impoundments.** Crushing, milling, concentrating, smelting and tailings impoundments at an existing copper mine facility in existence and subject to a discharge permit on the effective date of the copper mine rule are not required to meet the liner, design, and construction requirements of Subsection A of 20.6.7.22 NMAC and may continue to operate as previously authorized permitted under a discharge permit ~~subject to compliance with the contingency requirements of 20.6.7.22 NMAC so long as they are maintained within the existing footprint~~ Permit conditions contained in an existing discharge permit may be included in a discharge permit issued under the copper mine rule, and such conditions shall not be considered to be “additional conditions.” under Subsection I of 20.6.7.10 NMAC. if the permittee:

- (a) obtains a variance pursuant to 20.6.7.31 NMAC;
- (b) implements measures during operations, as approved by the department, to control, contain, and mitigate the sources and extent of any water pollution above applicable standards to the maximum extent practicable; and
- (c) abates any water pollution above applicable standards consistent with the requirements of 20.6.2.4101, 20.6.2.4103, 20.6.2.4106, 20.6.2.4107, 20.6.2.4108 and 20.6.2.4112 NMAC; and;-
- (d) does not expand the area authorized for discharge set forth in the existing discharge permit.

185. For the reasons discussed regarding Section 20.6.7.20.B.(2) NMAC, in order to provide for consistency with the statutory requirements of the Water Quality Act, the Tyrone Agreement as approved by the Commission and to give the public an opportunity to address site-specific issues related to water pollution from existing facilities, variance language for these types of facilities should be included in this paragraph. New Section 20.6.7.31 NMAC provides additional rationale in support of the need for variances for copper mine and the site-specific

factors that should be addressed for continued operation of existing facilities that have caused exceedances of Commission water quality standards. Olson Testimony WCO Ex. 3, pg. 34; and Findings of Fact 160-162 of this Statement of Reasons.

Section 20.6.7.23.A

A. Engineering design requirements. At a minimum, the following requirements shall be met in designing new pipeline or tank systems at copper mine facilities that contain process water or impacted stormwater unless the applicant or permittee can demonstrate that an alternate design will provide an equal or greater level of containment and will not result in an exceedance of applicable standards.

186. Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consistent with these findings this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.23.A(1)(b)

(1) **New Pipelines.** New pipelines shall:

(a) be constructed of impermeable materials that are compatible with the particular contents that are contained and carried in the pipeline and are resistant to degradation by ultraviolet light if they will be exposed to sunlight;

(b) for pipelines ~~located outside of the open pit surface drainage area and~~ outside an area authorized for discharge of process water, impacted stormwater or tailings, incorporate a mechanism for monitoring the integrity of the pipeline system including visual inspections, pressure change sensors, or other appropriate means; and

187. In the first sentence of Subparagraph (b) it is necessary that the language “*outside of the open pit surface drainage area and*”, as proposed by the Department, be deleted. Some of these pipelines carry fluids with high levels of water contaminants such as raffinate or pregnant leach solutions. Routine inspection and maintenance of pipelines that contain water contaminants is a standard operating practice at any type of facility regardless of where it is located to minimize

discharges of contaminants that could impact ground water. Sections III-VI of this Statement of Reasons also address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consistent with these findings this language should be deleted as shown above. Olson Testimony WCO Ex. 3, pg. 36; and Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.23.B(2)

(2) **Existing pipeline and tank facilities.** A pipeline or tank system in existence on the effective date of the copper mine rule is not required to meet the design requirements of Subsection A of 20.6.7.23 NMAC and may continue to operate as previously permitted under a discharge permit provided that ~~“, for a tank in contact with the ground surface and located outside an open pit surface drainage area,”~~ it is inspected and tested at least once every ten years for integrity pursuant to Subsection C of 20.6.7.23 NMAC. If an existing tank or pipeline system cannot maintain integrity it shall be replaced in accordance with the engineering requirements of Subsection A of 20.6.7.23 NMAC and 20.6.7.17 NMAC as applicable.

188. In the first sentence of Subparagraph (b) it is necessary that the language “*for a tank in contact with the ground surface outside of the open pit surface drainage area*”, as proposed by the Department, be deleted. Some of these tanks contain fluids similar to that of pipelines that have high levels of water contaminants such as raffinate or pregnant leach solutions. Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consistent with these findings this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.24A(4)

(4) For new and existing open pits, the excavation or operation of which will result in an exceedance of applicable standards, the applicant or operator shall obtain an appropriate variance pursuant to 20.6.7.31 NMAC. During operation of an open pit, the standards of 20.6.2.3103 NMAC do not apply within the area of open pit hydrologic containment.

189. It is necessary to amend this provision and add language requiring a variance for facilities that will pollute ground water in excess of Commission standards. As written, the Departments proposed language effectively creates a blanket exemption for open pits that cause ground water contamination in excess of Commission standards and authorizes pollution by rule. This approach does not consider whether specific best management practices could be implemented to reduce contamination that is occurring and without giving the public the opportunity to address site-specific issues at a hearing. The purpose of the discharge permits is to prevent water pollution consistent with the statutory requirements of the Water Quality Act in 74-6-4(E) NMSA 1978. Open pits typically cause water pollution in excess of Commission standards from the presence of exposed mineral and rock faces within an open pit. It is acknowledged that the interaction of precipitation and oxygen with exposed rock faces containing sulfide minerals in an open pit will likely cause ground water contamination through runoff of stormwater into the open pit or through vertical migration of stormwater runoff into fractured rock within the pit. In addition, consistent with the discussions in Section 20.6.7.20.B(2) NMAC, in order to provide for consistency with the statutory requirements of the Water Quality Act, the Tyrone Agreement as approved by the Commission, and to give the public an opportunity to address site-specific issues related to water pollution from existing facilities, variance language for these types of facilities should be included in this paragraph. New Section 20.6.7.31 NMAC provides additional rationale in support of the need for variances for copper mine and the site-

specific factors that should be addressed for continued operation of existing facilities that have caused exceedances of Commission water quality standards. Olson Testimony WCO Ex. 3, pg. 37; and Findings of Fact 160-161 of this Statement of Reasons.

Section 20.6.7.25.A

A. Material characterization requirements: All waste rock removed from an underground mine and taken to the surface shall be characterized and managed pursuant to the copper mine rule. Any waste rock removed from an underground copper mine facility, any tailings or any other waste that is intended to be deposited in the mine shall be evaluated for its potential to generate acid and/or to release water contaminants that ~~may would~~ cause an exceedance of applicable standards following placement in the underground mine facility. A plan for determining the potential of the material to release water contaminants, and the method for such evaluations, shall be submitted to the department for approval in a material characterization plan pursuant to Paragraph (1) of Section A of 20.6.7.21 NMAC.

190. The language “*may*” cause (not “*would*” cause) an exceedance of the standards is consistently used throughout the Copper Mine Rule and other Commission rules when describing potential impacts to water quality. It is necessary to amend the rule as shown above for internal consistency in the Copper Mine Rule and consistency with other Commission rules, and to establish a more appropriate burden of proof.

Section 20.6.7.25.A

A. Engineering design requirements. At a minimum, the following requirements shall be met in designing new truck and equipment washing facilities at copper mine facilities unless the applicant or permittee can demonstrate that an alternate design will provide an equal or greater level of containment and will not result in an exceedance of applicable standards.

191. Sections III-VI of this Statement of Reasons address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consistent with these findings this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.26B(2)

B. Construction.

(1) **New truck or equipment wash facilities.** Construction of new truck or equipment wash facility shall be performed in accordance with the applicable engineering requirements of Subsection A of 20.6.7.26 NMAC and 20.6.7.17 NMAC.

(2) **Existing truck and equipment wash facilities.** A truck or- equipment wash facility in existence on the effective date of the copper mine rule ~~and located outside of the open pit surface drainage area~~ shall meet the design requirements of Subsection A of 20.6.7.26 NMAC within one year of the approval of a discharge permit renewal pursuant to the copper mine rule.

192. In the first sentence of Paragraph (2) it is necessary that the language “*located outside of the open pit surface drainage area*” as proposed by the Department be deleted. Truck wash facilities may generate fluids that contain water contaminants. Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consistent with these findings this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.28.B

B. Monitoring wells - required locations. A permittee shall monitor ground water quality as close as practicable to the discharge, including around the perimeter ~~and downgradient~~ of each open pit, and downgradient of each leach stockpile, waste rock stockpile, tailings impoundment, process water impoundment, and impacted stormwater impoundment. The department may require additional wells around the perimeter of mine units that are underlain by areas where ground water flow directions are uncertain, including fracture flow systems, and around copper mine units that have the potential to cause an exceedance of applicable standards. ground water mounding. ~~The department may require additional monitoring wells at any other unit of a copper mine facility that has the potential to cause an exceedance of applicable standards as additional permit conditions in accordance with Subsection I of 20.6.7.10 NMAC.~~ Monitoring wells shall be located pursuant to this ~~s~~Section to detect an exceedance(s) or a trend towards exceedance(s) of applicable the ground water standards at the earliest possible occurrence, so that investigation of the extent of contamination and actions to abate the address the source of contamination to ensure compliance with applicable standards may be implemented

as soon as possible. The department may require that monitoring locations be changed, added or eliminated based on monitoring data or data regarding hydrologic gradient.

193. Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently monitoring of water pollution must occur at a potential “*place of withdrawal*” which is downgradient and as close as practicable to a source of water pollution. Consistent with these findings this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

194. Other changes are made to 20.6.7.28.B NMAC for the purpose of clarification of the language.

Section 20.6.7.28B(2)

(2) **Ground water monitoring – new and existing leach stockpiles, waste rock stockpiles, tailings impoundments.** A permittee shall install a sufficient number of monitoring wells around and downgradient of the perimeter of each new and existing leach stockpile, waste rock stockpile and tailings impoundment ~~located outside of the open pit surface drainage area, including its leachate and solution capture and containment systems,~~ to adequately monitor ground water that may be impacted by water contaminants from each ~~those~~ units. Each monitoring well shall be installed as close as practicable to each new or existing ~~the proposed~~ leach stockpile, waste rock stockpile or tailings impoundment, ~~including its leachate and solution capture and containment systems,~~ taking into account surface topography, hydrogeologic conditions, geologic controls, infrastructure, engineering design plans, depth to ground water, working distance and safety.

(a) For a new copper mine facility, the monitoring well networks shall be installed at least 180 days before emplacement of ore, waste rock or discharge of tailings at an individual leach stockpile, waste rock stockpile or tailings impoundment to allow sampling prior to discharge.

(b) A permittee constructing a new leach stockpile, waste rock stockpile or tailings impoundment at an existing copper mine facility, or expanding the footprint of an existing leach stockpile, waste rock stockpile, or tailings impoundment, shall install the monitoring well networks required to monitor ground water around and downgradient of the leach stockpile, waste rock stockpile or tailings impoundment before emplacement of ore, waste rock or discharge of tailings unless an existing monitor well network ~~adequately~~ monitors water

quality ~~in the area~~ of the new leach stockpile, waste rock stockpile or tailings impoundment consistent with the requirements of this section.

195. In the first sentence of Paragraph (2) it is necessary that the language “*located outside of the open pit surface drainage area*” as proposed by the Department be deleted.

Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently monitoring of water pollution in the open pit must occur at a potential “*place of withdrawal*”. Consistent with these findings this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

196. The language “*including its leachate and solution capture and containment system*” as proposed by the Department should be deleted from the first sentence of Paragraph (2). This language creates a point of compliance concept that that is not permissible under the Water Quality as discussed in Section VIII of this Statement of Reasons. For these reasons, the above deletions should be made. Olson Testimony WCO Ex. 3, pg. 39. Findings of Fact 87-119 of this Statement of Reasons.

Section 20.6.7.28.B(3)

(3) **Ground water monitoring – process water and impacted stormwater impoundments.** A minimum of two monitoring wells shall be located downgradient and within 75 feet (measured as horizontal map distance) or as close as practicable taking into account surface topography, hydrogeologic conditions, infrastructure, working distance and safety of each new process water or impacted stormwater impoundment. ~~located outside of an open pit surface drainage area.~~

197. It is necessary that the language “*located outside of the open pit surface drainage area*” as proposed by the Department be deleted. Sections III-VI of this Statement of Reasons

addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently monitoring of water pollution in the open pit must occur at a potential “*place of withdrawal*”. Consistent with these findings this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.28.B(4)

(4) **Ground water monitoring – open pit.** A permittee shall install a sufficient number of monitoring wells as close as practicable to around the perimeter of an open pit to monitor ground water quality and the hydrologic gradient around the pit.

198. Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation requires that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently monitoring of water pollution must occur at a potential “*place of withdrawal*” which is as close as practicable to a source of water pollution. Consistent with these findings this language should be amended as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.28.M

M. Perennial stream sampling and reporting - routine. A permittee shall submit to the department for approval a proposal to collect quarterly surface water samples from each perennial surface waters of the state within a copper mine facility as necessary to monitor potential ground water inflow to the perennial surface water. Analytes to be sampled and analyzed shall be based on the geochemical characteristics of the solution or material contained in the impoundment or mine unit closest to or most likely to effect the perennial stream being sampled. A permittee shall submit to the department in the semi-annual monitoring reports the field parameter measurements, the analytical results (including the laboratory quality assurance

and quality control summary report) and a map showing the location of each sampling location in relation to the copper mine facility.

199. The language “*as necessary to monitor ground water inflow to the perennial surface water*”, as proposed by the Department, should be deleted. This phrase should be deleted because it limits the applicability of stream monitoring and does not conform with Commission rules for approval of discharge permits. Pursuant to 20.6.2.3109.H(2) NMAC, the Secretary shall not approve a discharge permit that will cause any stream standard to be violated. Historically, perennial streams at mine facilities have been polluted from ground water inflow and from impacted stormwater runoff from mine discharge activities. As a result, perennial streams must be monitored to determine compliance with Commission stream standards without limitation. It is especially important to protect limited state perennial surface water resources in current times of diminishing stream flows due to extended drought. For these reasons, the above phrase should be deleted as set out above. Olson Testimony WCO Ex. 3, pg. 43.

Section 20.6.7.28.N

N. Process water, tailings slurry, impacted stormwater, seep, and spring sampling and reporting. An applicant for a new, renewed or modified discharge permit or permittee shall submit for department approval a sampling and analysis plan to monitor quarterly the quality of process water, tailings slurry, ~~and~~ impacted stormwater, [seeps, and springs](#) at a copper mine facility. Proposed analytes shall include field parameters as required in Subsection F of this ~~s~~Section, alkalinity-bicarbonate, alkalinity-carbonate, metals, and other analytes from Section 20.6.2.3103 NMAC as applicable.

200. The title of this section lists seep and spring sampling and reporting as one of the purposes of this subsection of the Copper Mine Rule. However, the text of Subsection N does not reference that the sampling and analysis plan is to include water quality monitoring of seeps and springs. It is necessary to amend this subsection and add the language “*seeps and springs*” to clarify the intent of the subsection. Olson Testimony Tr. vol. 9, pg. 2258, lines 3-24, Olson

Testimony Tr. vol. 9, pg. 2310, lines 23-25 and pg. 2311, lines 1-16; Brown Testimony Tr. vol. 10, pg. 2537, lines 18-25; and Brown Testimony Tr. vol. 10, pg. 2538, lines 1-4.

Section 20.6.7.30.A

A. Exceedance of ground water standards—~~all monitoring wells except impoundment monitoring wells~~. If monitoring of a water contaminant source ~~other than an impoundment~~ indicates that applicable standards are exceeded, or the extent or magnitude of existing ground water contamination is significantly increasing, the permittee shall collect a confirmatory sample from the monitoring location(s) within 15 days to confirm the initial sampling results, unless the permittee elects to accept the initial sampling results as an accurate measurement of water quality. Within 30 days of the confirmation of the exceedance of applicable standards or significant increases in existing contamination, the permittee shall take the following actions. The department may approve a longer time period not to exceed 90 days for good cause shown.

201. This subsection is duplicative of Subsection B in 20.6.7.30 NMAC with the exception of provision 20.6.7.30.B(1) NMAC. For simplification of the rule and readability, the language of Subsections A and B are combined into one subsection and the exception of provision 20.6.7.30.B(1) NMAC that is added to Subsection A as a new 20.6.7.30.A(4) NMAC. The combination of these 2 subsections is non-substantive and does not change the intent of the rule requirements.

Section 20.6.7.30.A(1)

(1) A corrective action plan shall be submitted to the department for approval. The corrective action plan shall describe any ~~corrective actions taken repairs made~~ or proposed to address the cause of the exceedance or increase and shall propose a corrective action plan source control measures and a schedule for implementation to ensure compliance with applicable standards. The department shall approve or disapprove the corrective action plan within 60 days of receipt. Following the department's approval of the corrective action plan, the permittee shall initiate implementation of the plan according to the approved schedule. If the department does not approve the corrective action plan, the department shall notify the permittee of the deficiencies by certified mail. The permittee shall submit a revised corrective action plan to the department within 60 days of the date of postal notice of the notice of deficiency. The department shall approve or disapprove the revised corrective action plan within 60 days of receipt.

202. Sections III-VI of this Statement of Reasons address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation require that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consistent with these findings this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.30.A(2)

(2) If the department determines that a discharge causes or may with reasonable probability cause water pollution in excess of applicable standards and requirements of Section 20.6.2.4103 NMAC, and the water pollution will not be abated within 180 days after confirmation of the exceedance or increase is required to be given pursuant to Subsection A of this section, the secretary shall notify the facility owner/operator that he is a responsible person and that an abatement plan shall be required pursuant to Section 20.6.2.4104 and Subsection A of Section 20.6.2.4106 NMAC. The permittee may be required to submit to the department for approval an abatement plan, which includes a site investigation to define the source, nature and extent of contamination; a proposed abatement option, and a schedule for its implementation. The site investigation and abatement option shall be consistent with the requirements and provisions of Sections 20.6.2.4101, 20.6.2.4103, 20.6.2.4106, 20.6.2.4107, 20.6.2.4108 and 20.6.2.4112 NMAC.

203. The language in the proposed rule is not clear regarding abatement of water pollution. The proposed rule does not state that corrective actions plans are going to result in Commission standards being met. The rule as proposed states that an abatement plan “*may be required*” but does not specify under what conditions the abatement plan is going to be required. When water quality standards are exceeded, it is important to know how this water pollution will be treated and cleaned up. It is necessary that the rule be clear that if water quality standards are still exceeded after corrective actions have been implemented then abatement shall be required. The above amendments to the rule provide specificity and clarity on when an abatement plan is required. Travers Testimony Tr. vol. 7, pg. 1562, lines 12-25 and pg. 1563, lines 1-5.

Section 20.6.7.30.A(4)

(4) If the corrective action plan proposes actions to correct deficiencies with a liner, the proposed actions shall include repair or replacement of the existing liner, or construction and lining of a new impoundment. If liner repair is practicable, repairs shall be made pursuant to 20.6.7.17 NMAC or using a material that is equivalent to the existing liner with respect to material thickness and composition. Repairs shall be completed in accordance with the approved schedule. If liner repair is not practicable, the corrective action plan shall propose reconstruction and relining of the impoundment pursuant to 20.6.7.17 NMAC or construction and lining of a new impoundment pursuant to 20.6.7.17 NMAC. Reconstruction or construction plans and specifications for the impoundment shall be completed pursuant to 20.6.7.17 NMAC and submitted with the corrective action plan along with a schedule for implementation. If a new impoundment is constructed the existing impoundment shall be closed pursuant to 20.6.7.33 NMAC.

204. This subparagraph is directly taken from the language of 20.6.7.30.B(1) NMAC and is the only provision of Subsection B that is not duplicative of Subsection A. For simplification and readability the language of Subsection A and B are combined into one subsection and the exception of provision 20.6.7.30.B(1) NMAC is added to Subsection A as a new 20.6.7.30.A(4) NMAC that provides for a contingency action related to liner systems. The combination of Subsections A and B is non-substantive and does not change the intent of the rule requirements.

Section 20.6.7.30.B

~~**B.—Exceedance of ground water standards—impoundment monitoring well.—**If sampling from a monitoring well(s) intended to monitor an impoundment indicates that applicable water standards are exceeded, or the extent or magnitude of existing ground water contamination is significantly increasing, the permittee shall collect a confirmatory sample from the monitoring location(s) within 15 days to confirm the initial sampling results unless the permittee elects to accept the initial sampling results as an accurate measurement of water quality. Within 30 days of the confirmation of the exceedance of applicable standards or significant increases in existing contamination, the permittee shall take the following actions. The department may approve a longer time period not to exceed 90 days for good cause shown.~~

~~—————(1) A corrective action plan shall be submitted to the department for approval. The corrective action plan shall describe any repairs or changes in practices made or proposed to address the cause of the exceedance or increase and shall propose source control measures and a schedule for implementation. The department shall approve or disapprove the corrective action plan within 60 days of receipt. If the corrective action plan proposes actions to correct deficiencies with the liner, the proposed actions shall include repair or replacement of the~~

~~existing liner, or construction and lining of a new impoundment. If liner repair is practicable, repairs shall be made pursuant to 20.6.7.17 NMAC or using a material that is equivalent to the existing liner with respect to material thickness and composition. Repairs shall be completed in accordance with the approved schedule. If liner repair is not practicable, the corrective action plan shall propose reconstruction and relining of the impoundment pursuant to 20.6.7.17 NMAC or construction and lining of a new impoundment pursuant to 20.6.7.17 NMAC. Reconstruction or construction plans and specifications for the impoundment shall be completed pursuant to 20.6.7.17 NMAC and submitted with the corrective action plan along with a schedule for implementation. If a new impoundment is constructed the existing impoundment shall be closed pursuant to 20.6.7.33 NMAC.~~

~~(2) Following the department's approval of the corrective action plan, the permittee shall initiate implementation of the plan according to the approved schedule. If the department does not approve the corrective action plan, the department shall notify the permittee of the deficiencies by certified mail. The permittee shall submit a revised corrective action plan to the department within 60 days of the date of postal notice of the notice of deficiency. The department shall approve or disapprove the revised corrective action plan within 60 days of receipt.~~

~~(3) The permittee may be required to submit to the department for approval an abatement plan, which includes a site investigation to define the source, nature and extent of contamination; a proposed abatement option, and a schedule for its implementation. The site investigation and abatement option shall be consistent with the requirements and provisions of Sections 20.6.2.4101, 20.6.2.4103, 20.6.2.4106, 20.6.2.4107, 20.6.2.4108 and 20.6.2.4112 NMAC.~~

~~(4) A corrective action plan or abatement plan approved or submitted prior to the date of the copper mine rule shall satisfy the requirements of this subsection provided that any substantial change in monitoring results after the effective date of the copper mine rule may require additional corrective action under this Subsection or modification of a previously approved or submitted corrective action plan or abatement plan.~~

205. This subsection is duplicative of Subsection A in 20.6.7.30 NMAC with the exception of provision 20.6.7.30.B(1) NMAC. For simplification of the rule and readability, it is necessary to delete Subsection B and combine Subsections A and B into one subsection. The exception of provision 20.6.7.30.B(1) NMAC is added to Subsection A as a new 20.6.7.30.A(4) NMAC. The combination of these 2 subsections is non-substantive and does not change the intent of the rule requirements.

Section 20.6.7.31

20.6.7.31 RESERVED VARIANCES PETITIONS

A. Any person seeking a variance pursuant to Section 74-6-4(H) NMSA 1978 for a copper mine facility or a unit of a copper mine facility shall do so by filing a written petition

with the commission.

B. A petition for a variance from the copper mine rule or any provision of 20.6.2 NMAC shall be submitted to the commission in accordance with this section instead of the requirements in 20.6.2.1210 NMAC.

C. The petitioner shall provide the commission with all documents and information that are material to the commission's consideration of the petition. At a minimum, petitions shall:

- (1) state the petitioner's name and address;
- (2) state the date of the petition;
- (3) describe the facility, discharge or activity for which the variance is sought;
- (4) identify the location of the affected discharge unit or units, including the address, legal description and a location map;
- (5) describe the ground water and any surface water body or watercourse that will or may be affected if the variance is granted;
- (6) identify the provisions of the copper mine rule or 20.6.2 NMAC for which the variance is requested;
- (7) describe in detail the extent to which the petitioner requests to vary from the copper mine rule or 20.6.2 NMAC;
- (8) describe in detail how compliance with the copper mine rule will impose an unreasonable burden upon the discharger's lawful business, occupation or activity, including providing all supporting data, reports, and any other relevant information;
- (9) identify the requested variance period, including all reasons, data, reports, and any other information demonstrating that such time period is justified and reasonable; and,
- (10) identify any alternative facility design, alternative measuring device, or other variation from the copper mine rule or 20.6.2 NMAC and describe why variation is warranted based upon site-specific conditions.

D. If the petition requests a variance to allow the discharge of water contaminants that will or may cause ground water pollution above any applicable standard, the petition shall also include the following:

- (1) if the petition:
 - (a) involves a discharge that exists on the effective date of the copper rule, a demonstration that it is technically and economically infeasible to stop the discharge; or,
 - (b) involves a new discharge, a demonstration that the discharge is essential to the discharger's mining operation and that the proposed location of the discharge will minimize the operation's footprint and environmental impact;
- (2) information on the nature and extent of the existing water quality at the site;
- (3) information on the maximum extent and subsequent abatement of water pollution that is projected to occur if the variance is granted, assuming implementation of all controls proposed by the discharger;
- (4) information on how water pollution will be minimized to the extent practicable and how ~~that~~ the water pollution at the discharge site will be fully contained onsite and abated to meet applicable standards;
- (5) a description of all water uses and users within one mile downgradient of the discharge site; and
- (6) such other information as the commission may reasonably request.

E. Public Notice of Petition: Within ten days of submitting a petition for variance the petitioner shall provide public notice of the submittal of its petition pursuant to this Subsection. The content of the notice and location of postings shall be submitted for prior approval by the department and include a summary of the contents of the petition and the manner in which copies of the petition may be obtained. The petitioner shall provide public notice of the petition as provided below.

(1) The petitioner shall post at or near the affected discharge unit in a place conspicuous to the public a copy of the notice that is at least two feet by three feet in size, in English and in Spanish, and a second copy of the public notice at another place conspicuous to the public.

(2) If the petition requests to discharge water contaminants in excess of applicable standards, the petitioner shall mail the notice to the owners of record of all properties located within one mile of the boundary of the property where the affected discharge unit is located. If there are no properties other than properties owned by the discharger or its affiliates within the one mile distance from the boundary of property where the discharge site is located, the petitioner shall provide notice to owners of record of the next nearest adjacent properties not owned by the discharger or its affiliates;

(3) The petitioner shall provide notice by certified mail, return receipt requested, to the owner of the discharge site if the petitioner is not the owner; and

(4) The petitioner shall publish the notice in English and in Spanish in a newspaper of general circulation in the location of the affected discharge unit in a display ad at least three inches by four inches. The notice shall not be published in the classified or legal advertisements section but in a place in the newspaper reasonably calculated to give the general public the most effective notice.

F. Within 15 days of completion of the public notice requirements in Subsection D of this section, the petitioner shall submit to the department proof of notice, including an affidavit of mailing(s) and the list of property owner(s), proof of publication, and an affidavit of posting, as appropriate.

G. The variance petition shall be reviewed in accordance with the adjudicatory procedures of 20.1.3 NMAC.

H. The commission may grant the requested variance, in whole or in part, may grant the variance subject to conditions, or may deny the variance based upon the record proper in accordance with Section 74-6-4(H) NMSA 1978. In making its decision, the commission shall consider whether:

(a) the variance will result in undue risk to property;

(b) the copper rule, if enforced during the requested variance period, will cause an unreasonable burden upon the discharger's lawful business, occupation or activity;

(c) the petitioner will implement measures to control the source and extent of water pollution in excess of applicable standards to the maximum extent practicable;

(d) the petitioner will fully contain the water pollution at the discharge site during the variance period, and prevent further migration of water pollution; and

(d) the petitioner can and will abate the water pollution to meet applicable standards following closure and all required financial assurance is or will be in place to insure that the water pollution will be abated.

I. A variance from the copper mine rule or 20.6.2 NMAC may be granted for a period of time in excess of five years and may be granted for the operational life of the facility.

J. For variances granted for a period in excess of five years, the department shall review the variance at least every five years in conjunction with the discharge permit renewal to determine whether the conditions of approval are being met. The existence and nature of the variance shall be disclosed in all public notices otherwise applicable to the discharge permit. If the department determines that such conditions are not being met, the department may request a hearing before the commission to revoke, modify or otherwise reconsider the variance. On appeal from a decision by the department to renew or modify a facility's discharge permit, any party may present argument and evidence to the commission to reconsider the granting of an existing variance for the same facility.

K. An order of the commission is final and bars the petitioner from petitioning for the same variance without special permission from the commission. The commission may consider, among other things, the development of new information and techniques to be sufficient justification for a second petition. A variance may not be extended or renewed unless a new petition is filed and processed in accordance with the procedures established by this section.

206. It is necessary to add a new Section 31 to the copper mine rule to provide for variances for copper mine facilities. This section allows for a clear and transparent public process whereby copper mines can continue to be a long-term viable industry in the state of New Mexico while at the same time protecting valuable state ground water resources for present and foreseeable future use as required by the Water Quality Act. Olson Testimony WCO Ex. 3, pg. 49.

207. Copper mine facilities such as leach stockpiles, waste rock stockpiles and tailing impoundments are known to be a cause of ground water contamination. In some cases, they have caused significant large-scale ground water pollution downgradient of the facilities as discussed in Findings of Fact of this Statement of Reasons related to amendments to Department proposed language for 20.6.7.20 NMAC, 20.6.7.21 NMAC, and 20.6.7.22 NMAC. The copper mine rule as proposed by the Department is not designed to prevent contamination of ground water from large scale copper mine facilities such as waste rock piles, tailings impoundments and leach stockpiles within the open pit. The Department proposed copper mine rule specifically authorizes a permittee to intentionally pollute ground water from these facilities by rule. As discussed in

Sections III-VI and Section VIII of this Statement of Reasons the central premise of the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation is that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. As proposed by the Department, the rule:

- (a) violates statutory provisions of the Water Quality Act;
- (b) is inconsistent with the history of Commission ground water protection rules;
- (c) is inconsistent with other existing Commission rules
- (d) is inconsistent with the Commission’s Decision and Order on Remand in the Tyrone Mine Hearings;
- (e) is inconsistent with the Tyrone Agreement approved by the Commission;
- (f) does not give consideration to site-specific engineering or technological controls that could prevent water pollution;
- (g) has the potential to harm the state and the public through the loss of state ground water resources, and by setting precedence to apply a point of compliance concept to all other discharge permit permittees and other state regulatory programs.

Olson Testimony WCO Ex. 3, pg. 49; Findings of Fact 9-76 of this Statement of Reasons; and Findings of Fact 87-119 of this Statement of Reasons.

208. The Department initially proposed that the Copper Mine Rule include a section on variances to the Copper Rule Advisory Committee in February of 2012 during the beginning of the rule development process. The variance language was subsequently modified several times based upon Copper Rule Advisory Committee member input. It is necessary to add a new Section 31 on variances that will:

- (a) provide a mechanism for varying from the requirements of the copper mine rule that allows site-specific considerations of engineering and technological controls for pollution prevention;
- (b) provide clear direction on the information necessary in support of a variance;
- (c) allow for consideration of economic and technical feasibility issues;
- (d) provide that exceedances of Commission standards are minimized and abated;
- (e) give the potentially affected public appropriate notice and an opportunity to participate in the process;
- (f) provide for Department review of the variance on a five year basis to evaluate its effectiveness; and
- (g) provide that a variance may be granted for time period up to the operational life of the facility as current Commission rules in 20.6.2.1210.C NMAC do not allow the granting of a variance for a period of time in excess of five years.

Olson Testimony WCO Ex. 3, pgs. 49-50.

209. It is necessary that the Copper Mine Rule provide for consistency with the statutory requirements of the Water Quality Act; other Commission rules; the historical implementation of the Water Quality Act and Commission rules; the Commission's Tyrone Mine Decision and Order on Remand; the Tyrone Agreement as approved by the Commission; and to give the public an opportunity to address site-specific issues related to water pollution from new or existing facilities. Therefore, it is necessary to require that provisions for a variance for these facilities be included in the Copper Mine Rule. Olson Testimony WCO Ex. 3, pg. 50.

Section 20.6.7.32

20.6.7.32 RESERVED VARIANCE HEARINGS

A. Except as otherwise provided in this section, variance hearings shall be conducted pursuant to 20.1.3 NMAC.

B. Upon motion of the hearing officer or any party, the commission or the hearing officer may consolidate pending variance petitions for a given copper mine, provided that the petitions to be consolidated involve common issues and that consolidation will not prejudice any party.

210. Consistent with the addition of a new Section 31 on variances, it is necessary to add a new Section 32 to the Copper Mine Rule to provide clarity on the means for conducting hearings on variances. It is also necessary to allow that multiple variance petitions be consolidated for the sake of efficiency. Therefore, a new Section 32 should be added to the copper mine rule as shown above. Olson Testimony WCO Ex. 3, pg. 50.

Section 20.6.7.33.D

~~**D. — Open pits.** The applicant or permittee shall provide detailed information and a closure plan for open pits that demonstrates how the following criteria will be addressed through water management and/or other activities at these facilities to minimize the potential to cause an exceedance of applicable water quality standards:~~

~~—————(1) Open pits in which the evaporation from the surface of an open pit water body is predicted to exceed the water inflow shall be considered to be a hydrologic evaporative sink. If an open pit is determined to be a hydrologic evaporative sink, the standards of 20.6.2.3103 NMAC do not apply within the area of open pit hydrologic containment.~~

~~—————(2) After closure, if water within an open pit is predicted to flow from the open pit into ground water and the discharge from an open pit may cause an exceedance of applicable standards at monitoring well locations specified by 20.6.7.28 NMAC, then the open pit shall be considered a flow through pit and the open pit water quality must meet ground water standards of 20.6.2.3103 NMAC or the open pit must be pumped in order to maintain an area of open pit hydrologic containment.~~

D. Ground Water Quality. The applicant or permittee shall provide detailed information and a closure plan that demonstrates how ground water quality will meet applicable standards within the copper mine facility upon closure with the following exceptions:

(1) Open pits in which the evaporation from the surface of an open pit water body is predicted to exceed the water inflow shall be considered to be a hydrologic evaporative sink. If an open pit is determined to be a hydrologic evaporative sink, the standards of 20.6.4 NMAC apply to the pit lake within the open pit and the standards of 20.6.2.3103 NMAC apply to the ground water reporting to the open pit.

(2) If the permittee can demonstrate that the area of ground water pollution is not at a place of withdrawal of water for present or reasonably foreseeable future use, applicable standards need not be met. Determination of whether the ground water is a place of withdrawal of water for present or reasonably foreseeable future use shall be based upon an evaluation of the following criteria:

- (a) Site hydrology and geology;
- (b) The quality of ground water prior to any discharge from the facility;
- (c) Past and current land use in the vicinity;
- (d) Potential future land use in the vicinity;
- (e) Past and current water use in the vicinity;
- (f) Potential future water use in the vicinity; and
- (g) Population trends in the vicinity.

211. During their testimony related to questions on place of withdrawal, the Department witnesses testified a number of times that ground water throughout the mine is a future place of withdrawal upon closure and that quality standards apply throughout the copper mine facility upon closure. Olson Testimony Tr. vol. 8, pg. 2042, lines 1-6; Skibitski Written Rebuttal Testimony pg.2; Skibitski Testimony Tr. vol. 4, pg. 980 line 25 and pg. 981, lines 1-12; Brown Testimony Tr. vol. 3, pg. 556, lines 21-24; Brown Testimony Tr. vol. 4, pg. 803, lines 17-24; and Brown Testimony Tr. vol. 4, pg. 927, lines 18-24;

212. The rule as proposed does not explicitly state the intent of the Department that ground water throughout the mine is a future place of withdrawal upon closure and that water quality standards apply throughout the copper mine facility upon closure. Therefore, consistent with the Department's testimony and its intent, it is necessary to amend the proposed rule as shown above. Olson Testimony Tr. vol. 8, pg. 2042, lines 7-11; and WCO Sur-rebuttal Ex. #3.

213. This amendment clearly states that the closure plan must meet applicable standards in ground water upon closure with 2 exceptions. First, the ground water standards would not need to be met in the pit lake itself at the bottom of the open pit if the pit acts as an evaporative sink. Secondly, the standards would not have to be met if the permittee can demonstrate that the polluted ground water is not a place of withdrawal. This would be an

administrative process under the permit application where the Department can make an administrative determination on place of withdrawal. The type of information necessary for the Department's determination would be clearly spelled out in the rule and include the seven criteria required by the Commission in the 2009 Tyrone Mine Decision and Order on Remand. Olson Testimony Tr. vol. 8, pg. 2042, lines 14-25 and pg. 2043, lines 1-21.

214. These amendments are consistent with the Department's testimony, the Water Quality Act, existing Commission rules, the historical implementation of the Water Quality Act and Commission rules, and the Commission's Tyrone Mine Order on Remand. These amendments are necessary to avoid confusion over the application of standards and statutory permitting limitations related to "*place of withdrawal*". Olson Testimony Tr. vol. 8, pg. 2043, lines 22-25; and Olson Testimony Tr. vol. 8, pg. 2044, lines 1-5.

Section 20.6.7.33.F

F. Cover system: At closure, a permittee shall install a cover system on waste rock piles, leach stockpiles, tailing impoundments and other facilities that have the potential to generate leachate and cause an exceedance of applicable standards ~~at monitoring well locations specified by 20.6.7.28 NMAC~~ using the following criteria, as appropriate. Any soil cover systems installed before the effective date of the copper mine rule are not subject to the requirements of the copper mine rule unless the department determines that an exceedance of applicable standards has occurred or is likely to occur as a result of the existing installed cover system, and that modification of the cover will prevent further impacts to ground water. Any cover system installed at an existing copper mine facility after the effective date of the copper mine rule shall be a store and release earthen cover system with a thickness of 36 inches and shall be constructed in accordance with the applicable requirements of Paragraphs 1 through 3 of this Subsection. For leach and waste rock stockpiles inside the open pit surface drainage area, a 36-inch cover is only required on the top surfaces.

215. It is necessary that the language "*at monitoring well locations specified by 20.6.7.28 NMAC*", as proposed by the Department, be deleted. This language creates a point of compliance concept that is inconsistent with the Water Quality Act, existing Commission rules, the historical implementation of the Water Quality Act and Commission rules, and the

Commission’s Tyrone Mine Order on Remand as discussed in Sections III-VI and Section VIII of this Statement of Reasons. Olson Testimony WCO Ex. 3, pg. 52. Findings of Fact 9-76 of this Statement of Reasons; and Findings of Fact 87-119 of this Statement of Reasons.

Section 20.6.7.33.I(4)

(4) Where characterization results show materials remaining within or beneath any reservoir or other impoundment that are not naturally occurring to be a source or potential source of ground water contamination, ~~outside the open pit surface drainage area,~~ the reservoir or impoundment, shall be covered and re-vegetated pursuant to this ~~s~~Section.

216. It is necessary that the language “*outside of the open pit surface drainage area*” as proposed by the Department be deleted. Sections III-VI of this Statement of Reasons addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation require that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently, closure of sources of water pollution that may cause an exceedance of Commission standards must occur at any potential “*place of withdrawal*”. Consistent with these findings, this language should be deleted as shown above. Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.33.I(6)

(6) Reservoirs and impoundments ~~located outside the open pit surface drainage area~~ shall be closed in a manner that creates positive drainage away from the impoundments, unless needed during closure and post closure for storm water retention or seepage interception, post-closure water management and treatment, or unless otherwise approved by the department. Post-closure reservoirs or impoundments to be used for the collection of non-impacted storm water and located over areas where residual wastes, vadose zone contamination or ground water contamination remains shall be synthetically lined pursuant to the design and construction criteria of Paragraph (4) of Subsection D of 20.6.7.17 NMAC.

217. It is necessary that the language “*located outside of the open pit surface drainage area*” as proposed by the Department be deleted. Sections III-VI of this Statement of Reasons

addresses the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation require that ground water pollution in excess of Commission standards must be prevented at any “*place of withdrawal*” unless a variance is obtained. Consequently, closure of sources of water pollution that may cause an exceedance of Commission standards must occur at any potential “*place of withdrawal*”. Consistent with these findings this language should be deleted as shown above.

Findings of Fact 9-76 of this Statement of Reasons.

Section 20.6.7.35.B

B. Water quality monitoring and reporting. A permittee shall perform water quality monitoring and reporting during the post-closure period pursuant to 20.6.7.28 NMAC and 20.6.7.29 NMAC, as applicable and modified by this ~~s~~Section. Ground water elevation contour maps required pursuant to Subsection L of 20.6.27 NMAC shall be submitted annually during the post-closure period. Subject to the requirements of any applicable abatement plans, the A permittee may request to reduce the frequency of or cease sampling a water quality monitoring location if the water contaminants in a monitoring well have been below the applicable standards for eight consecutive quarters, provided an adequate monitoring well network remains to monitor all ground water that exceeds the standards of 20.6.2.3103 NMAC, to demonstrate complete hydrologic containment of ground water that exceeds the standards of 20.6.2.3103 NMAC, and to demonstrate the continued existence and extent of hydrologic evaporative sinks. If sampling of a monitoring well ceases in accordance with this Subsection, the monitoring well shall be abandoned in accordance with applicable requirements unless the permittee requests and the department approves the monitoring well to remain in place for an alternative use or future monitoring.

218. The language in the proposed rule is not clear regarding abatement of water pollution. When water quality standards are exceeded, it is important to know how this water pollution will be treated and cleaned up. It is necessary that the rule be clear that if water quality standards are still exceeded then appropriate monitoring be required. Sections III-VI of this Statement of Reasons also address the central premise that the Water Quality Act, existing Commission rules, historical implementation of the Water Quality Act and Commission rules, and the Tyrone litigation require that ground water pollution in excess of Commission standards must

be prevented at any “*place of withdrawal*”. Consistent with these findings this language should be amended to provide specificity and clarity on monitoring of water pollution. Findings of Fact 9-76 of this Statement of Reasons; and Travers Testimony Tr. vol. 7, pg. 1562, lines 12-25 and pg. 1563, lines 1-5.

X. STATUTORY CRITERIA FOR ADOPTION OF RULES

219. Section 74-6-4(E) NMSA 1978 states that in adopting regulations to prevent or abate water pollution, the Commission shall give weight it deems appropriate to all relevant facts and circumstances, including the following 7 criteria:

220. **(1) character and degree of injury to or interference with health, welfare, environment and property.** In New Mexico, ground water is public property and belongs to the state. Copper mines pose a high potential risk of ground water contamination if ore and wastes are not stored and handled properly, and due to the volume of concentrated materials and wastes generated over large areas. Copper mine facilities have contaminated extensive areas of ground water in excess of Commission standards. Findings of Fact 77-86 of this Statement of Reasons.

221. The Copper Mine Rule as proposed by the Department is based on a point of compliance concept that allows intentional pollution of ground water underneath copper mine waste units. This water pollution would be allowed to travel downgradient of the waste unit and be contained by a ground water interceptor system some distance away. Compliance with water quality standards would be measured further downgradient of the ground water pumping interceptor system. Findings of Fact 87-100 of this Statement of Reasons.

222. Under the proposed rule, approximately 2.5 square miles of water resources would be lost at a minimum from a single tailing impoundment at the Chino mine not including other mine contaminant source areas. At the Tyrone mine, approximately 9 square miles of

public ground water resources would be lost. Contamination of public ground water resources in excess of the water quality standards promulgated by the Commission presents a risk to health, welfare, the environment and property. Findings of Fact 114-116 of this Statement of Reasons.

223. As amended in this Statement of Reasons, the rule prevents pollution of water resources and limits the character and degree of injury to or interference with health, welfare, environment and property. Findings of Fact 120-218 of this Statement of Reasons.

224. **(2) the public interest, including the social and economic value of the sources of water contaminants.** The Supreme Court has characterized water as “*our greatest natural resource.*” *State ex.rel. Ericson v. McLean*, 62 N.M. 264, 272, 308 P.2d 983 (1957). Ground water is a public resource and approximately 90 percent of population of New Mexico depends on ground water as a source of drinking water. Olson Testimony WCO Ex. 1, pg. 3.

225. Copper mines have a social and economic value as they provide jobs and a source of income for some New Mexicans and produce tax revenue to the state. The total direct and indirect economic impact of Freeport’s mining operations on New Mexico in 2011 was \$326 million. Brack Written Testimony pg. 6.

226. As proposed by the Department the Copper Mine Rule shifts the burden of proof from the discharger to the agency to prove that ground water standards will be exceeded. As such, known sources of water pollution are presumed to not cause water pollution unless the agency proves otherwise. Pollution of ground water must then occur before it can be prevented. Under the Department’s point of compliance concept proposed in the rule, water pollution will likely become extensive before the Department can meet this requirement and extensive harm to the state will occur through the loss of water resources. Findings of Fact 111-114 of this Statement of Reasons.

227. The rule, as amended in this Statement of Reasons, protects the public interest, including the social and economic value of the sources of water contaminants. The rule strikes a balance between the interests of the state and public in maintaining uncontaminated ground water resources and the economic value of the industrial source of water contaminants. Findings of Fact 120-218 of this Statement of Reasons.

228. **(3) technical practicability and economic reasonableness of reducing or eliminating water contaminants from the sources involved and previous experience with equipment and methods available to control the water contaminants involved.** A number of the ground water pollution prevention measures called for in the Departments proposed Copper Mine Rule are technically practicable and economically reasonable. However, the proposed rule ignores the technical practicability and economic reasonableness of implementing pollution prevention measures at waste rock stockpiles and tailing impoundments. One mine company in New Mexico plans to install a liner system for a 530-acre tailing impoundment that they consider to be technically and economically viable. Findings of Fact 101-110 of this Statement of Reasons.

229. Section 74-6-4(E) NMSA 1978 states that “[r]egulations 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.” As amended in this Statement of Reasons, the rule prevents water pollution in a technically practicable and economical manner using best available demonstrated control technology, processes and operating methods. Findings of Fact 120-218 of this Statement of Reasons.

230. **(4) successive uses, including but not limited to domestic, commercial, industrial, pastoral, agricultural, wildlife and recreational uses.** The primary concern of the Copper Mine Rule is to prevent ground water contamination and to monitor water quality to assure that it remains uncontaminated. Potential future uses make preservation of the water resource important to the state and its citizens. Findings of Fact 9-36 of this Statement of Reasons.

231. The Copper Mine Rule as proposed by the Department allows intentional pollution of ground water underneath copper mine waste units regardless of whether the ground water is at a present or reasonably foreseeable place of withdrawal of water. Findings of Fact 87-100 of this Statement of Reasons.

232. As amended in this Statement of Reasons, the rule prevents water pollution and allows for successive uses of public ground water resources including domestic, commercial, industrial, pastoral, agricultural, wildlife, and recreational uses. Findings of Fact 120-218 of this Statement of Reasons.

233. **(5) feasibility of a user or a subsequent user treating the water before a subsequent use.** Should ground water become contaminated by a copper mine, it is possible that users or subsequent users of the ground water could treat the water before use. This is not a preferred alternative to prevention of pollution and the costs of treatment would likely be high. In addition, it shifts the costs of the contamination from those who caused the contamination to the public or future generations. The Commission's water quality rules in 20.6.2.4000 NMAC through 20.6.2.4115 NMAC require abatement of contaminated ground water by the responsible party rather than requiring treatment by subsequent users.

234. As amended in this Statement of Reasons, the rule prevents water pollution such that treatment before a subsequent is not necessary. Findings of Fact 120-218 of this Statement of Reasons.

235. **(6) property rights and accustomed uses.** In addressing property rights, it is important to note that a person does not have the right to contaminate ground water in excess of ground water quality standards. Ground water is a public property, and is protected as a public resource. Findings of Fact 9-36 of this Statement of Reasons.

236. As amended in this Statement of Reasons, the rule prevents water pollution and protects property rights and accustomed uses. Findings of Fact 120-218 of this Statement of Reasons.

237. **(7) federal water quality requirements.** The Copper Mine rule is proposed for adoption under state statutes for prevention of water pollution and is not directly linked to federal water quality requirements. However, there are federal programs that rely on the historical interpretation of the Department on “*place of withdrawal*” addressed in Findings of Fact 37-46 of this Statement of Reasons. Adoption of a point of compliance approach may lead federal programs that permit hazardous wastes and the cleanup of hazardous waste sites in New Mexico under federal laws and rules, such as those under the Hazardous Waste Act and superfund site cleanups, to allow pollution of ground water at those sites. Finding of Fact 119 of this Statement of Reasons.

238. As amended in this Statement of Reasons, the rule prevents water pollution consistent with the Water Quality Act; historical agency interpretations and application of the Water Quality Act and Commission rules; Commission decisions in Tyrone litigation; the direction given by the Court of Appeals in its opinion on the Tyrone appeal; and the Tyrone

Agreement. The rule as amended does not adopt a point of compliance concept and maintains consistency with pollution prevention measures implemented at hazardous waste and superfund sites. Findings of Fact 120-218 of this Statement of Reasons.

CONCLUSIONS OF LAW

I. STATUTES AND REGULATIONS

1. This case is to consider the adoption of Title 20, Chapter 6, Part 7, Rules Governing Ground Water Protection – Supplemental Permitting Requirements For Copper Mine Facilities as proposed by the Department under the Water Quality Act
2. The Commission has the authority to adopt the rule pursuant to 74-6-4(E) NMSA 1978.
3. The decisions of the Commission with regard to adoption of Title 20, Chapter 6, Part 7 in this proceeding shall not be (1) arbitrary, capricious or an abuse of discretion, (2) unsupported by the substantial evidence in the record, or (3) otherwise not in accordance with the law. Section 74-6-7(B) NMSA 1978.
4. This case is to consider the adoption of new rules for the copper mine industry to prevent water pollution. Section 74-6-4(E) NMSA 1978 sets forth the duties of the Commission and matters to be considered in the adoption of rules to prevent or abate water pollution.
5. Section 74-6-4(E) NMSA 1978 states that in adopting rules to prevent or abate water pollution, the Commission shall give weight it deems appropriate to all relevant facts and circumstances, including: (1) character and degree of injury to or interference with health, welfare, environment and property; (2) the public interest, including the social and economic value of the sources of water contaminants; (3) technical practicability and economic

reasonableness of reducing or eliminating water contaminants from the sources involved and previous experience with equipment and methods available to control the water contaminants involved; (4) successive uses, including but not limited to domestic, commercial, industrial, pastoral, agricultural, wildlife and recreational uses; (5) feasibility of a user or a subsequent user treating the water before a subsequent use; (6) property rights and accustomed uses; and (7) federal water quality requirements.

6. Section 74-6-4(K) NMSA 1978 states that the Commission “*shall specify in regulations the measures to be taken to prevent water pollution and to monitor water quality. The commission may adopt regulations for particular industries. The commission shall adopt regulations for the dairy industry and the copper industry. 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.*”

7. Section 74-6-4(H) NMSA 1978 gives the Commission the authority to grant exceptions to its rules, subject to limitations, after a public hearing and specifies that “*The commission may only grant a variance conditioned upon a person effecting a particular abatement of water pollution within a reasonable period of time. Any variance shall be granted*

for the period of time specified by the commission. The commission shall adopt regulations specifying the procedure under which variances may be sought, which regulations shall provide for the holding of a public hearing before any variance is granted”.

8. Section 74-6-5(E)(3) NMSA 1978 of the Water Quality Act requires that the constituent agency deny a discharge permit if *“the discharge would cause or contribute to water contaminant levels in excess of any state or federal standard. Determination of the discharge’s effect on ground water shall be measured at any place of withdrawal of water for present and reasonably foreseeable future use”.*

9. The Commissions rulemaking authority is limited in Section 74-6-12(F) NMSA 1978 which states that in adopting regulations *“reasonable degradation of water quality resulting from beneficial use shall be allowed. Such degradation shall not result in impairment of water quality to the extent that water quality standards are exceeded”.*

10. Under 20.6.2.3101.A NMAC, the purpose of the Commission discharge permitting rules is for *“controlling discharges onto or below the surface of the ground [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.....”.*

11. Under 20.6.2.4101.A NMAC, the purpose of the Commission rules on prevention and abatement of water pollution is to *“abate pollution of subsurface water so that all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, is either remediated or protected for use as domestic and agricultural water supply”.*

12. There are numerous other areas of the Commission rules that link to the permit denial requirements in 74-6-5.E(3) NMSA 1978.

13. The definition of “*hazard to public*” in 20.6.2.7.AA NMAC links “*place of withdrawal*” to a determination of whether a hazard to public health exists which is a consideration in Commission rules related to whether a permit can be approved.

14. Commission numeric water quality standards in 20.6.2.3103 NMAC require that a discharge “*will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section*”.

15. Commission rules in 20.6.2.3109.E NMAC and 20.6.2.3109. E(1) NMAC allows the agency to modify a permit to abate water pollution based upon an exceedance of the 20.6.2.3103 NMAC standards which apply at a “*place of withdrawal*”.

16. Commission rule 20.6.2.3109.H NMAC requires that a permit be denied for “*the discharge of any water contaminant which may result in a hazard to public health.*” The definition of “*hazard to public health*” is required to apply at a “*place of withdrawal*”.

17. Commission rule 20.6.2.4103.B NMAC requires abatement or water pollution to the 20.6.2.3103 NMAC numeric water quality standards which are required to be applied at a “*place of withdrawal*”.

18. Commission rule 20.6.2.4106.E NMAC requires that a Stage 2 abatement plan be designed to attain the 20.6.2.3103 NMAC numeric water quality standards, which are required to be applied at a “*place of withdrawal*”.

19. Commission rule 20.6.2.4109.F NMAC requires that a Stage 2 abatement plan must attain the 20.6.2.3103 NMAC numeric water quality standards to be approved and therefore the standards are required to be applied at a “*place of withdrawal*”.

20. Commission rule 20.6.2.4112 NMAC conditions approval of completion of abatement to attaining the 20.6.2.3103 NMAC numeric water quality standards, which are required to be applied at a “*place of withdrawal*”.

21. Pursuant to its authority under the Water Quality Act, the Commission has promulgated different types of variance rules regarding prevention and abatement of water pollution.

22. Commission rule 20.6.2.4103 NMAC contains a method for petitioning the Commission for alternative abatement standards that can exceed the Commission’s numeric water quality standards of 20.6.2.3103 NMAC under certain circumstances. In order to obtain alternative abatement standards, the permittee must be in the process of abatement and the petition may be granted only after a public hearing.

23. Commission rule 20.6.2.1210 NMAC contains a mechanism for considering site-specific variances to Commission rules in accordance with Section 74-6-4(H) NMSA 1978. The Commission may only grant a variance after a public hearing and variance terms are limited to a five-year period.

24. Commission rule 20.6.6.18 NMAC is a new variance rule for dairy facilities that allows for alternate discharge designs consistent with the Water Quality Act and contains criteria for considering the granting of a variance, including allowing a variance to be granted for the useful life of the feature and providing for 5-year review of the effectiveness of the variance.

II. AGENCY INTERPRETATIONS

25. From the time Commission permitting rules were adopted in 1977 to date, the Department and the Oil Conservation Division have considered New Mexico ground water to be a

public resource where all ground water underlying a discharge site is protected from water pollution unless the permittee can demonstrate that the water does not have a present or reasonably foreseeable future use. This regulatory interpretation has been applied to all types of discharge sites under the authority of each constituent agency.

III. PLACE OF WITHDRAWAL LITIGATION

26. The Water Quality Act and Commission rules do not define the term “*place of withdrawal of water for present or reasonable foreseeable future use*” nor do they give direction as to how to determine where this place exists.

27. The language “*place of withdrawal of water for present and reasonably foreseeable use*” has been the subject of technically complex litigation in copper mine adjudicatory permit hearings before the Department and the Commission for over a decade and is a central issue in the adoption of the Copper Mine Rule.

28. In 2004, the Commission issued a decision that determined that the Tyrone Mine was a “place of withdrawal,” and that all ground water underneath the Tyrone Mine was required to be protected under the Water Quality Act.

29. The 2004 Commission decision adopted a rebuttable presumption that all ground water with less than 10,000 milligrams per liter TDS “*is protectable for present or reasonably foreseeable future use.*”

30. In 2006, the Court of Appeals upheld all portions of the Commission’s 2004 decision with the exception of the Commission determination on “*place of withdrawal*” related to conditions 4 and 17 of the permit.

31. The Court of Appeals concluded that the Commission decision that the entire mine site is a place of withdrawal was overly broad and directed the Commission to conduct further proceedings to “*create some general factors or policies to guide its determination*” as to what constitutes a “*place of withdrawal*”.

32. The Court of Appeals did not disturb or overturn that Commission’s rebuttable presumption that all ground water with less than 10,000 milligrams per liter TDS “*is protectable for present or reasonably foreseeable future use.*”

33. The Court of Appeals decided to “*decline to adopt as a standard a ‘point of compliance’*” concept for the purposes of protecting ground water quality standards.

34. After extensive hearings on remand, the Commission issued its “*Decision and Order on Remand*” on February 4, 2009 and concluded as a matter of law that the Water Quality Act protected ground water at “*any place of withdrawal for present and reasonably foreseeable future use.*”

35. The Commission 2009 Decision and Order on Remand concluded as a matter of law that the Water Quality Act “*does not establish any specific ‘point(s) of compliance’ for compliance with water quality standards*”.

36. The Commission’ 2009 Decision and Order on Remand adopted seven criteria for determining “*place of withdrawal*” including: (1) Site hydrology and geology; (2) The quality of ground water prior to any discharge from that facility; (3) Past and current land use in the vicinity; (4) Potential future land use in the vicinity; (5) Past and current water use in the vicinity; (6) Potential future water use in the vicinity; and (7) Population trends in the vicinity.

37. The Commission 2009 Decision and Order on remand applied these criteria to the Tyrone mine and concluded as a matter of law 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).” except for areas of the mine “where the hydraulic conductivity of the underlying water-bearing units is at least 0.05 ft./day and is capable of producing water in sufficient amounts to support beneficial use.”

38. The Commission concluded as a matter of law that 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.”*

39. The Department and Freeport signed a Settlement Agreement and Stipulated Final Order (Tyrone Agreement) on December 20, 2010 that was approved by the Commission.

40. The Tyrone Agreement agreed to implement permitting mechanisms including a variance process for new and existing copper mine facilities and required Tyrone to meet water quality standards at its mine site or seek alternate abatement standards.

41. The Tyrone Agreement set up a mechanism for Tyrone to request variances from water quality standards and to petition the Commission for alternative abatement standards upon closure, consistent with the requirements of the Commission’s 2009 Decision and Order on Remand.

42. The Tyrone Agreement established an *“Open Pit Surface Drainage Area”*, similar to that proposed in 20.6.7.7.B(42) NMAC of the Copper Mine Rule where consideration may be given to construction of facilities that do not employ full technological controls for the protection of ground water through the variance process as long as water pollution is abated to applicable standards upon closure.

IV. DETERMINATIONS

43. The mechanisms for preventing and abating water pollution in all Commission rules, including the Copper Mine Rule, must be consistent with the statutory provisions of the Water Quality Act and existing Commission rules.

44. It is vitally important that the statutes and rules for preventing and abating water, including the Copper Mine Rule, be implemented by the constituent agencies in a fair and consistent manner.

45. The mechanisms for preventing and abating water pollution in all Commission rules, including the Copper Mine Rule, must be consistent with the prior litigation decisions of the Commission.

46. A primary function of the Commission's duties and powers is to adopt specific rules to prevent and abate water pollution" as set out in 74-6-4(E) NMSA 1978.

47. Section 74-6-4(H) NMSA 1978 contemplates that there are circumstances under which a permit applicant may be allowed, through the granting of a variance, to cause temporary pollution of water as long as it is abated within a reasonable period of time. However, a person is limited from being granted approval of a variance that allows permanent or long-term water pollution.

48. The plain language of Section 74-6-5(E)(3) NMSA 1978 explicitly prohibits approval of a discharge permit that allows ground water to be contaminated above water quality standards at any place of withdrawal of water for present or reasonably foreseeable future use.

49. Allowing a discharge to intentionally cause ground water pollution in excess of Commission standards without a variance petition subject to a public hearing violates the Water Quality Act and the authority granted the Commission.

50. Section 74-6-12(F) NMSA 1978 allows some degradation of ground water quality but prohibits degradation in excess of the water quality standards.

51. Numerous areas of the Commission rules link to the permit denial requirements in 74-6-5(E)(3) NMSA 1978 and the Copper Mine Rule needs to be consistent with all other Commission rules.

52. The ground water pollution prevention and abatement interpretations of the Department and the Oil Conservation Division over the history of the implementation of the Water Quality Act and Commission rules since 1977 have been clear and consistent over time in preventing water pollution and have not allowed for a point of compliance approach to water quality protection.

53. The Water Quality Act does not establish any specific point(s) of compliance for compliance with water quality standards.

54. It is a rebuttable presumption that all ground water with less than 10,000 milligrams per liter TDS is protectable for present or reasonably foreseeable future use unless a permittee can make a demonstrate to the contrary.

55. The Water Quality Act protects ground water at any place of withdrawal of water for present and reasonably foreseeable future use.

56. The criteria established in the 2009 Commission Decision and Order on Remand are neutral criteria applicable to making a determination of whether any discharge site is a place

of withdrawal of water for present and reasonable foreseeable future use pursuant to Section 74-6-5(E)(3).

57. 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) subject to the limitations in the Commission's 2009 Decision and Order on Remand.

58. The Tyrone Agreement set out a clear framework for issuing discharge permits in a manner consistent with the requirements of the Water Quality Act, the Commission's rules, historical precedent of the Commission and its constituent agencies, and the Commission's February 4, 2009 Decision and Order on Remand in the Tyrone Mine litigation.

59. The terms and provisions of the Tyrone Agreement remain applicable to the Tyrone mine and the Copper Mine Rule must be consistent with those terms and provisions.

60. As proposed, the Copper Mine Rule creates a point of compliance concept in the rule that allows intentional pollution of ground water in excess of Commission standards underlying a permitted facility and downgradient of the facility up to a point of compliance away from the discharge site.

61. A point of compliance concept is contrary to the purpose and requirements of the Water Quality Act, Commission rules, historical agency interpretation of the Water Quality Act and Commission rules, and the Commission decisions in the Tyrone litigation.

62. As proposed, the Copper Mine Rule allows intentional pollution of ground water without the need for a variance as set out in the Water Quality Act and existing Commission rules, and is inconsistent with the Commission decisions in the Tyrone litigation and the Tyrone Agreement.

63. As proposed, the Copper Mine Rule does not address the statutory requirements of 74-6-5(E)(3) NMSA 1978 for a site-specific determination of what constitutes a “*place of withdrawal*”; the Commission’s 2009 Decision and Order on Remand adopting and applying criteria to determine that the Tyrone Mine is a “*place of withdrawal*”; and the Court of Appeals direction to the Commission to create some general factors or policies to guide a determination as to what constitutes a “*place of withdrawal*”.

64. As proposed, the Copper Mine Rule effectively considers that all mine facilities are not “*places of withdrawal*” without making a determination based upon site-specific ground water factual information, including information on the use of ground water at those sites.

65. Amendments to the Copper Mine Rule, as contained in this Statement of Reasons, are necessary so that the rule is consistent with the Water Quality Act; historical agency interpretations and application of the Water Quality Act and Commission rules; Commission decisions in Tyrone litigation; the direction given by the Court of Appeals in its opinion on the Tyrone appeal; and the Tyrone Agreement.

66. The Copper Mine Rule, as amended in this Statement of Reasons, is in the public interest, considering the social and economic value of the sources of water contaminants.

67. Adoption of the Copper Mine Rule, as amended in this Statement of Reasons, will ensure that discharges from copper mine facilities will not injure or interfere with health, welfare, environment and property.

68. Compliance with the Copper Mine Rule, as amended in this Statement of Reasons, will not unreasonably impair the social and economic value of the sources of water contaminants.

69. The Copper Mine Rule, as amended in this Statement of Reasons, strikes a fair balance between the interests of the state and public in maintaining uncontaminated ground water resources, including the social and economic value of the sources of water contaminants.

70. Compliance with the Copper Mine Rule, as amended in this Statement of Reasons, is technically practical and economically reasonable for preventing water pollution and is achievable through available control technologies and proper operating methods. On a site-specific basis, a permittee has the opportunity to petition for a variance from the requirements of the amended rule.

71. The Copper Mine Rule, as amended in this Statement of Reasons, will limit contaminant concentrations to levels that allow for all successive future uses of ground water resources. Potential future uses make preservation of the resource important to the state and its citizens.

72. The Copper Mine Rule, as amended in this Statement of Reasons, will help prevent ground water pollution thereby protecting property rights and allow for accustomed uses of ground water resources. A person does not have a right to contaminate ground water in excess of the water quality standards promulgated by the Commission. Ground water is public property and is protected as a public resource.

73. The Copper Mine Rule, as amended in this Statement of Reasons, is consistent with federal water quality requirements as they relate to permitting and abatement of water pollution.

74. The Copper Mine Rule, as amended in this Statement of Reasons, meets all statutory criteria for adoption.

75. The preponderance of the evidence demonstrates that the Copper Mine Rule, as amended in this Statement of Reasons, should be approved.

THE COMMISSION HEREBY ORDERS:

The Copper Mine Rule, as amended in this Statement of Reasons, including any non-substantive amendments necessary for reformatting and filing with the State Records Center, is hereby adopted.

Respectfully submitted,

William C. Olson

By _____

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August 22, 2013
Electronic Copy
Original Filed with WQCC Administrator

Certificate of Service

I certify that the following were served with the foregoing pleading by mail or hand delivery on August 22, 2013:

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