

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

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<b>In the Matter of:</b>	)	
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<b>PROPOSED AMENDMENT</b>	)	<b>No. WQCC 12-01(R)</b>
<b>TO 20.6.2 NMAC (Copper Rule)</b>	)	
	)	
	)	

**WRITTEN DIRECT TESTIMONY OF TIMOTHY E. EASTEP**

My name is Timothy E. Eastep, and I am the Senior Manager for Freeport-McMoRan’s New Mexico Operations, which include Freeport-McMoRan Chino Mines Company, Freeport-McMoRan Tyrone Inc., and Freeport-McMoRan Cobre Mining Company (collectively, “Freeport”). I am presenting this written testimony on behalf of Freeport regarding the Petition to Adopt 20.6.7 and Request for Hearing filed by the New Mexico Environment Department (“NMED”) on October 30, 2012, which includes the new rules for copper mines (“Proposed Rule”).

**I. BACKGROUND AND EXPERIENCE**

I have a Bachelor of Science degree in Civil Engineering from Colorado State University and a Master of Science degree in Environmental Science & Engineering from Colorado School of Mines. I have over 22 years of experience working in the mining industry, 17 years of which have been spent working in environmental compliance and management systems for active and inactive Freeport mining operations around the world.

Currently, I am employed by Freeport and serve as the Senior Manager for the New Mexico Operations Administration group. In this capacity, my responsibilities include oversight

of the Environmental Services groups for Chino and Tyrone, the New Mexico Land, Water, and Reclamation group, and the currently inactive Cobre Mine. I also participated as a Freeport representative on the Technical Committee for the development of the Proposed Rule and attended all the Copper Rule Advisory Committee meetings. Prior to this position, I served as the Manager of the Environment, Land & Water Departments for Chino and Tyrone.

A copy of my resume is marked as Exhibit Eastep-1. It is accurate and up-to-date.

## **II. INTRODUCTION**

Freeport supports the Water Quality Control Commission's ("Commission") adoption of rules for the copper industry as required by the Water Quality Act, Section 74-6-4(K) NMSA 1978. In general, Freeport's position is that the Proposed Rule is appropriate for copper mine facilities in New Mexico. It incorporates and is consistent with conditions specified in discharge permits issued by NMED for Freeport's New Mexico copper mines and add some new requirements that go beyond existing permit conditions. It also recognizes that prevention of all impacts to ground water from copper mining operations is not practicable using modern mining practices and technologies. Consequently, where proven and practicable technologies do not exist to prevent any impacts to ground water, the Proposed Rule contains provisions designed to ensure that the impacts are contained within the mining facility.

Before moving to testimony regarding the Proposed Rule, I need to describe the myriad of environmental regulations that apply to copper mines in New Mexico. The discharge permit requirements under the Water Quality Act are a major component of mine permitting. However, many other federal and state environmental permitting and regulatory requirements may apply to a copper mine. It is important for the Commission to understand that these other laws and regulations exist because the Proposed Rule does not address all environmental impacts of

mining, and the Proposed Rule should not include requirements that conflict with other laws, and should avoid duplication as much as possible.

Copper mines are regulated by a complex web of sometimes overlapping jurisdictions, laws, and regulations covering several media (*i.e.*, air, water, waste, and hazardous waste). In addition, land ownership issues at many copper mine sites implicate additional federal and state regulatory schemes. The following are brief summaries of the New Mexico and Federal laws and regulations that may apply to copper mines in New Mexico.

**A. NEW MEXICO STATUTES AND REGULATIONS**

NEW MEXICO MINING ACT. The New Mexico Mining Act imposes reclamation and other regulatory obligations upon existing mining operations, new mining operations, and exploration. The Act is administered primarily by the Mining and Minerals Division of the Energy, Minerals and Natural Resources Department (“MMD”) under Mining Act Rules adopted by the Mining Commission. Mining operations that are subject to the Act must comply with detailed requirements during planning, construction, operation, and closure of mining operations. For existing mines, the requirements focus on reclamation requirements and not operations. For new mining operations, however, a mine developer must conduct a full environmental assessment before seeking a permit and must obtain a permit from MMD prior to constructing or operating the new mine. “Minimal impact mines” are subject to some reduced requirements, but are limited to ten acres in size. The Mining Act addresses compliance with environmental standards, but acknowledges NMED’s primary authority over water quality and other environmental standards. To coordinate oversight of compliance with environmental standards that are administered primarily by NMED, the Mining Act requires that proposed plans and permits required under the Mining Act be submitted to NMED for review and a determination

that the plans and permit requirements will achieve applicable standards. MMD retains regulatory and enforcement authority over mining operations throughout their operation to ensure that they comply with permits and the Act.

NEW MEXICO WATER QUALITY ACT. The New Mexico Water Quality Act created the Commission and provides the Commission with authority, among other things, to adopt water quality standards and promulgate regulations “to prevent or abate water pollution in the state.” NMSA § 74-6-4. The Proposed Rule is required under the Water Quality Act. The Commission also has adopted, and NMED administers, surface water quality standards. Compliance with surface water quality standards is achieved primarily through federal permits issued under the Clean Water Act, but also is addressed specifically under the Commission’s abatement regulations.

NEW MEXICO HAZARDOUS CHEMICALS INFORMATION ACT. New Mexico has enacted the Hazardous Chemicals Information Act, which is designed “to ensure that current information on the nature and location of hazardous chemicals is available to local emergency planning committees, emergency responders and the public as required by [the federal emergency planning and community right-to-know laws].” NMSA § 74-4E-2. This state law is designed to implement the federal emergency planning and community right-to-know requirements, but does impose at least two additional requirements not found in the federal requirements. First, facility owners or operators who are required to file an annual hazardous chemical inventory form must pay, at the time of filing, a fee. NMSA § 74-4E-8.A. Second, any facility owner or operator who knowingly, willfully, and intentionally fails to file any form, notice or report or fails to pay any fee shall be liable for a civil penalty up to \$5,000 for each violation. NMSA §§ 74-4E-9.

NEW MEXICO'S WILDLIFE CONSERVATION AND ENDANGERED PLANT

LAWS. The New Mexico Wildlife Conservation Act gives the New Mexico Game Commission and the Game and Fish Department the authority to develop a list of wildlife species indigenous to the state that are determined to be endangered. NMSA § 17-2-41.A. Similarly, the New Mexico Endangered Plants Act gives the New Mexico Natural Resources Department authority to list “endangered plant species.” NMSA § 75-6-1.B. “Endangered plant species” means “any plant species whose prospects of survival within the state are in jeopardy or are likely, within the foreseeable future, to become jeopardized.” NMSA § 75-6-1.A. The New Mexico Natural Resources Department also is authorized to establish a program to conserve all listed endangered plant species and is given the authority to prohibit the taking or possession of such species. NMSA § 75-6-1.C & D.

NEW MEXICO STATE LAND OFFICE LEASE REQUIREMENTS. Copper mines located on state trust lands are subject to regulation by the New Mexico State Land Office under lease provisions. The New Mexico Constitution provides broad authority to the state to issue contracts for the development and production of minerals, sand and gravel, or geothermal resources on state lands under such terms and provisions as provided by the legislature, provided that the contracts further the interests of the trust. New Mexico reserves the mineral and hydrocarbon rights on any state trust lands when they are disposed, together with access rights to develop the same. The State Land Office may issue mineral leases on terms for three years, and thereafter as long as minerals are produced in paying quantities, based on a surface rental plus royalties of between two percent and fifty percent of gross returns less smelting and transport costs. Leases are issued to the highest bidder at a public auction, are limited to six hundred forty

acres, and are subject to a strict mine development and reclamation plan to provide for orderly development and prevent resource waste.

NEW MEXICO SOLID WASTE LAWS. The New Mexico Solid Waste Act, and regulations promulgated thereunder, regulates solid waste in New Mexico. Under the Act, no person may construct, operate, modify, or close a solid waste facility without approval from NMED. NMSA § 74-9-20.A; 20.9.1 NMAC. The Act prohibits a person from disposing of solid waste at non-permitted facilities, unless the facility is otherwise authorized to accept solid waste for disposal under implementing regulations. NMSA § 74-9-31.A. A solid waste facility is defined as “any public or private system, facility, contiguous land and structures, location, improvements on the land, or other appurtenances or methods used for processing, transformation, recycling or disposal of solid waste, including landfill disposal facilities, transfer stations, resource recovery facilities, incinerators and other similar facilities not specified.” 10.9.2.7.S(11) . Various wastes are excluded from New Mexico’s solid waste program. These wastes include waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore, coal, copper, molybdenum, and other ores and minerals. NMSA § 74-9-3.N; 10.9.2.7(S)(9)(c). Accordingly, mining wastes such as overburden, tailing, and waste rock are excluded from coverage under the state solid waste program. However, solid wastes that are not unique to mining operations (*e.g.*, used oils, spent solvents, scrap metal, used greases, discarded commercial chemical products, drums and containers, soiled rags, used tires, used absorbents, laboratory wastes, construction and demolition debris, trash, petroleum contaminated soils, and non-mining process waters) are potentially subject to New Mexico’s solid waste program and, therefore, are subject to these regulations.

NEW MEXICO HAZARDOUS WASTE MANAGEMENT REGULATIONS. New Mexico has received authorization from the U.S. Environmental Protection Agency (“EPA”) to administer its state hazardous waste program in lieu of the federal hazardous waste program. New Mexico has adopted the federal hazardous waste management regulations with generally only minor, non-substantive amendments. The NMED Hazardous Waste Bureau enforces New Mexico hazardous waste regulations, which may apply to some wastes generated at copper mines, such as some spent cleaning solvents. Wastes generated from the extraction and beneficiation of copper ores, and some smelting wastes, are excluded from regulation as hazardous wastes. The Proposed Rule and the existing discharge permit requirements address ground water protection with respect to many wastes and materials excluded from regulation as hazardous wastes, such as concentrator tailings, waste rock and slag.

NEW MEXICO AIR QUALITY REGULATIONS. New Mexico’s air quality regulations require certain new and modified sources to obtain a permit before commencing construction. Most of these programs implement federal air quality requirements in New Mexico. New Mexico uses permit programs to implement its air quality regulations. New Mexico also requires pre-construction permits for sources and modifications that are not subject to the Federal Clean Air Act and its programs mentioned. These sources include stationary, temporary, and portable sources. Additionally, New Mexico has a toxic air pollutant program. 20 .2.72.400, *et seq.* This state program pre-dates the federal HAPs program in Title III of the Federal Clean Air Act and it continues to apply in New Mexico in addition to the federal HAPs program.

**B. FEDERAL STATUTES AND REGULATIONS**

BUREAU OF LAND MANAGEMENT SURFACE MANAGEMENT REGULATIONS.

The Federal Land Policy and Management Act (“FLPMA”) governs the way the Bureau of Land

Management (“BLM”) administers public lands, including mining on public lands. Under FLPMA, BLM’s land use decisions are subject to NEPA. BLM regulations require an operator to obtain a mining plan of operation (“MPO”) for mining operations on federal lands administered by BLM. An MPO contains detailed requirements, including a reclamation plan and description of the proposed operations. After approval of an MPO through the completion of an Environmental Assessment or Environmental Impact Study (discussed below under NEPA) , BLM retains regulatory and enforcement oversight over the mining operations subject to the MPO through reclamation of the mine. BLM requires that operators under MPOs provide financial assurance to ensure reclamation of the operations covered under an MPO.

FOREST SERVICE SURFACE MANAGEMENT REGULATIONS. Various laws establish the U.S. Forest Service’s (“USFS”) authority to administer certain public lands, including mining on public lands. USFS’s land use decisions are subject to NEPA. USFS regulations require a mine operator to obtain a plan of operation (“POO”) for mining operations on federal lands administered by USFS. A POO contains detailed requirements, including a reclamation plan and description of proposed operations. After approval of a POO, USFS retains regulatory and enforcement oversight over the mining operations subject to the POO. USFS requires that operators under POOs provide financial assurance to ensure reclamation of the operations covered under a POO.

BUREAU OF INDIAN AFFAIRS LEASE REQUIREMENTS. Issuance of leases and permits for extraction of minerals on Tribal and allotted lands is authorized and regulated under Bureau of Indian Affairs (“BIA”) regulations. These regulations specify BLM's authority and responsibility in regard to Tribal lands, including approval of mining and reclamation plans for mines located on Tribal lands. BIA’s regulations further provide that BLM's regulations

supplement those of the BIA. Surface mining and reclamation of Indian lands are subject to regulations that are administered by BIA. However, BLM is authorized to manage minerals on Indian lands, including the approval of mining plans. Thus, mining operations on tribal and allotted lands are subject to regulation as outlined in 43 C.F.R. § 3590.0-7.

FEDERAL CLEAN WATER ACT. The Federal Water Pollution Control Act, 33 U.S.C. §§ 1251, *et seq.* (“Clean Water Act”), provides that point source discharges of pollutants to waters of the United States are prohibited unless authorized by a permit. Mining activities may result in discharges to waters of the United States. The Clean Water Act has three major programs that apply to permitting of mining activities. These include the establishment of water quality standards pursuant to Section 303(c) of the Clean Water Act, which are established in New Mexico by the Water Quality Control Commission, as discussed above; NPDES permit requirements set forth in Section 402, which are administered in New Mexico by EPA, Region 6, and dredge and fill permit requirements set forth in Section 404, which are administered in New Mexico by the U.S. Army Corps of Engineers (“COE”). Copper mines are subject to each of these programs. Other Federal water quality programs applicable to copper mines in New Mexico include the Spill Prevention Control and Countermeasure (“SPCC”) program and the Federal Oil Pollution Act of 1990, which require plans to address oil spill prevention, containment, reporting and cleanup liability.

CLEAN AIR ACT. The Clean Air Act, 42 U.S.C. §§ 7401, *et seq.*, regulates air emissions through planning and control requirements that apply to existing stationary sources and provide for preconstruction review of new and modified major stationary sources to attain and maintain national ambient air quality standards. The Clean Air Act also provides for the regulation of hazardous air pollutants through a cooperative partnership between states and EPA,

which issues national standards or federal requirements and the states assume primary responsibility for implementing the requirements. As a prerequisite to assuming implementation responsibility, states must demonstrate to EPA that their programs meet minimum federal Clean Air Act requirements.

RESOURCE CONSERVATION AND RECOVERY ACT. The Resource Conservation and Recovery Act (“RCRA”) governs the management of solid and hazardous waste. RCRA divides wastes into two categories: Subtitle D (solid waste) and Subtitle C (hazardous waste). In October 1980, Congress amended RCRA by adding section 3001(b)(3)(A)(ii) (known as the Bevill Exclusion) for solid waste from the extraction, beneficiation, and processing of ores and minerals. The Bevill Exclusion excluded this mining waste from regulation as hazardous waste under Subtitle C of RCRA. RCRA uses the terms extraction, beneficiation, and mineral processing to describe the Bevill waste which is excluded from regulation under Subtitle C of RCRA. These initial stages of mining (*i.e.*, extraction and beneficiation) involve crushing and grinding of rocks to produce a valuable concentrate and relatively earthen-like large volume wastes. The latter stages of mining involve mineral processing which takes the valuable concentrate and uses chemical and heat intensive operations to drastically change the nature of the mineral and produce relatively low volume wastes (with some notable exceptions such as wastes from phosphoric acid production). All extraction and beneficiation wastes, and twenty special mineral processing wastes are excluded from RCRA Subtitle C regulation by virtue of the Bevill Exclusion. However, other types of solid and hazardous wastes at copper mining facilities may be subject to RCRA and its regulations.

TOXIC SUBSTANCES CONTROL ACT. The Toxic Substances Control Act (“TSCA”) provides EPA with authorities to regulate the manufacture, processing, distribution, use, and

disposal of chemical substances. Under TSCA, EPA may require health and environmental effects testing by manufacturers, importers and processors of chemical substances, which include organic and inorganic substances occurring in nature, as well as chemical elements. TSCA also authorizes EPA to require record keeping and reporting of information that is useful for the evaluation of risk, regulate chemical substances that present an unreasonable risk of injury to health or the environment, take action to address imminent hazards, require notification to EPA by prospective manufacturers of new chemicals, and make inspections or issue subpoenas.

HAZARDOUS MATERIAL TRANSPORTATION. The Department of Transportation (“DOT”) received the authority to regulate the transportation of hazardous materials from the Hazardous Materials Transportation Act (“HMTA”), 49 U.S.C. §§ 5101, *et seq.* DOT is authorized to issue (and has issued) regulations to implement the requirements of the HMTA. Under these federal hazardous materials transportation regulations, no person may offer a hazardous material for transportation in commerce unless the material is properly classed, described, packaged, marked, labeled, and in proper condition for shipment. Furthermore, no person may transport a hazardous material unless the material is handled and transported in accordance with certain requirements or an exemption is issued under the regulations. 49 C.F.R. § 171.2. Hazardous material classification, description, marking, labeling, and placarding requirements are set forth at in the regulations in addition to requirements for shipments and packaging.

MINE SAFETY AND HEALTH ADMINISTRATION. The Mine Safety and Health Administration (“MSHA”) administers the provisions of the Federal Mine Safety and Health Act of 1977 (Mine Act) and enforces compliance with mandatory safety and health standards as a means to eliminate fatal accidents; to reduce the frequency and severity of nonfatal accidents; to

minimize health hazards; and to promote improved safety and health conditions in mines.

MSHA carries out the mandates of the Mine Act at all mining and mineral processing operations in the United States, regardless of size, number of employees, commodity mined, or method of extraction. The Mine Act requires MSHA to inspect surface mines at least twice a year and underground mines at least four times a year (seasonal or intermittent operations are inspected less frequently). MSHA performs other important mandatory activities under the Mine Act. These include: investigating mine accidents, complaints of retaliatory discrimination filed by miners, hazardous condition complaints, knowing or willful (criminal) violations committed by agents of mine operators, and petitions for modification of mandatory safety standards; developing improved mandatory safety and health standards; assessing and collecting civil monetary penalties for violations of mine safety and health standards; expanding programs for the education and training of miners, operators and agents; reviewing for approval mine operators' mining plans and education and training plans; and approving and certifying the design of certain mining products.

OCCUPATIONAL SAFETY AND HEALTH ACT. The Occupational Safety and Health Act of 1970 created the Occupational Safety and Health Administration (“OSHA”), whose mission is to help employers and employees reduce on the job injuries, illnesses and deaths. OSHA directs national compliance initiatives in occupational safety and health. OSHA employs the following strategies to help employers and employees reduce injuries, illnesses, and deaths on the job: implementing new or improved safety and health management systems; completing worksite inspections; promoting cooperative programs including Voluntary Protection Programs, OSHA Strategic Partnerships, and other industry Alliances; establishing specific rights and responsibilities of employees and employers; supporting innovation in dealing

with workplace hazards; establishing recordkeeping and reporting requirements for employers; developing training programs for occupational safety and health personnel; partnering with states that operate their own occupational safety and health programs; and supporting the OSHA Consultation Program. MSHA, rather than OSHA, generally has jurisdiction over copper mines, but OSHA generally has jurisdiction over smelters.

SAFE DRINKING WATER ACT. The Safe Drinking Water Act (“SDWA”) directs EPA to establish a federal program setting minimum requirements for effective state programs to prevent underground injection which endangers ground-water resources of public water supply systems. The resulting regulations established two methods for authorization to inject: authorization by rule or by permit. The SDWA has programs and/or established new strategies to protect ground water by promulgating even more effective regulations to control the permitting, construction, operation, monitoring and closure of injection wells. The Commission has adopted regulations governing well injection in New Mexico, which would apply to any aspects of copper mines subject to that program. The SDWA also governs protection of drinking water supplies, and copper mines typically have drinking water supplies subject to regulation under the SDWA and New Mexico’s corresponding safe drinking water program.

EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW. The Emergency Planning and Community Right-to-Know Act (“EPCRA”) was passed to encourage and support emergency planning for responding to chemical accidents, and to provide local governments and the public with information about possible chemical hazards and releases in their communities. EPCRA requires reporting of information on extremely hazardous substances by businesses and government agencies that produce, use, or store the substances. EPA maintains a Toxic Release

Inventory, which provides citizens and local, state, and federal government agencies with access to information on releases of toxic chemicals by manufacturing facilities.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT. The Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”), 42 U.S.C. §§ 9601, *et seq.*, provides EPA with authority to assess, investigate, and cleanup environmental threats resulting from mining activities. Although CERCLA potentially can be applied to a broad range of mining sites, EPA has generally used it only at those sites where other regulations have not been able to achieve environmental protection goals. CERCLA also contains natural resource damage provisions that provides for the recovery of damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss. Natural resources means land, fish, wildlife, biota, air, water, ground water, drinking, water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any state or local government, any foreign government or any Indian tribe. EPA is not responsible for recovering natural resources damages. Rather, this responsibility generally lies with those agencies which administer federal lands.

NATIONAL ENVIRONMENTAL POLICY ACT. The National Environmental Policy Act (“NEPA”), 42 U.S.C. §§ 4321, *et seq.*, requires that federal agencies consider the environmental consequences of their actions and decisions as they carry out their mandated functions. Pursuant to NEPA, federal agencies must prepare detailed statements assessing the environmental impact of, and alternatives to, major federal actions that may significantly affect the environment. An environmental impact statement (“EIS”) shall provide fair and full discussion of significant environmental impacts and inform decision makers and the public of the

reasonable alternatives and mitigation measures which would avoid or minimize adverse impacts or enhance the quality of the environment. EISs must rigorously explore and objectively evaluate all reasonable alternatives even if they are not within the authority of the lead agency. For lesser actions, the agency may prepare an Environmental Assessment (“EA”) and/or make a Finding of No Significant Impact (“FONSI”). Federal actions specifically related to mining that may require an EIS include activities involving federally managed lands including approval of plans of operation for hardrock mining and/or milling operation and mineral leases and sales. In addition, certain federal permits required by EPA (*i.e.*, new source National Pollutant Discharge Elimination System (“NPDES”) issued by EPA) or the COE (*i.e.*, Section 404) may require NEPA assessments. The scope of impacts to be assessed should include all affected media, such as air, water, soil, biological, visual, recreational, cultural, and economic resources. Under NEPA, a lead agency is designated and is responsible for preparing the EIS. Other agencies may assist as cooperating agencies. For example, BLM may have the lead for an EIS for a hardrock mining plan of operation, and EPA and COE may be cooperating agencies for purposes of the environmental assessment needs for a NPDES permit to be issued by EPA and a Section 404 permit by the COE. For new mining projects requiring federal permits, NEPA offers the opportunity to identify permit conditions, including those needed to avoid or minimize impacts or to mitigate for unavoidable impacts. EPA’s review under NEPA assesses mining project alternatives, impacts, and mitigation. Issues may include the potential for acid rock drainage, aquatic and terrestrial habitat value and losses, sediment production, NPDES discharges, air emissions, mitigation and reclamation. Mitigation that is developed should be included as conditions of the NPDES permit to the extent authorized by law. Standards, such as

those established under the Clean Water Act or Clean Air Act, serve as thresholds in the NEPA document for determining the acceptability of project-related impacts or mitigation requirements. Therefore, from a procedural standpoint, the NEPA compliance process provides the vehicle for agency consideration of overall project-related impacts prior to the permit decision.

FEDERAL ENDANGERED SPECIES ACT. Under the Endangered Species Act (“ESA”), it is a federal offense to take a species which has been listed as threatened or endangered unless permitted to do so by the Secretary of Interior, Commerce, or Agriculture. 16 U.S.C. §§ 1538-39. A species is considered “endangered” if it is “in danger of extinction throughout all or a significant portion of its range,” and considered “threatened” if it is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” 16 U.S.C. § 1532. Species are listed as endangered or threatened based solely on “the best scientific and commercial data available,” although the potential economic impacts of the listing are not considered. 16 U.S.C. § 1533. A proposed listing may be challenged, and a currently listed species may be delisted by petition.

As you can see, a copper mine developer must assess the applicability of multiple environmental laws, go through multiple review process, and seek permits and approvals from many state and federal agencies. This is a challenging regulatory regime to coordinate with discharge permit requirements.

### **III. PROPOSED RULE**

Freeport’s comments on the Proposed Rule are addressed by our witnesses who are testifying on particular portions of the Proposed Rule, including my testimony below. We have received an Amended Petition filed by NMED on February 18, 2013. We appreciate the changes proposed by NMED, but have not had sufficient time to address them in the extensive testimony

prepared for this hearing. Consequently, Freeport's comments are based upon NMED's Proposed Rule as of October 30, 2012, and we will address NMED's proposed changes in rebuttal testimony. My direct testimony discusses certain provisions of the Proposed Rule as proposed by NMED on October 30, 2012. The text of the Proposed Rule sections to which my testimony relates is incorporated into my testimony below. My testimony also discusses the reasons why Freeport either supports or objects to such provisions, and I will note any changes that Freeport recommends to the Proposed Rule.

**A. 20.6.7.8 NMAC – REQUIREMENTS FOR DISCHARGING FROM COPPER MINE FACILITIES**

NMED proposes the following requirements for discharging from copper mine facilities under 20.6.7.8 NMAC (“Section 8”):

**A.** No person shall discharge effluent or leachate from a copper mine facility so that it may move directly or indirectly into ground water without a discharge permit approved by the department. A person intending to discharge from a copper mine facility shall submit an application for a discharge permit pursuant to 20.6.7.10 NMAC and remit fees pursuant to 20.6.7.9 NMAC.

**B.** Permittees, owners of a copper mine facility and holders of an expired permit are responsible for complying with the copper mine rule.

**C.** Unless otherwise noted in 20.6.7 NMAC, the requirements of 20.6.2.3101 through 20.6.2.3114 NMAC apply to a copper mine facility.

**D.** Compliance with commission rules including the requirements of 20.6.7 NMAC does not relieve a copper mine facility owner, operator or permittee from complying with the requirements of other applicable local, state and federal regulations or laws.

Subsections A through D under Section 8 set forth expectations as to how the Proposed Rule relate to other regulations under the Water Quality Act (“WQA”) and other local, state, and federal laws. This general guide is useful because it allows a permittee and other interested parties to understand the relationships between various laws that apply to copper mining.

Subsection A is necessary because it sets forth the circumstances as to when a copper mine facility needs to acquire a discharge permit. Subsection B is necessary because it establishes who is responsible for complying with the Proposed Rule. Subsection C is necessary

because it explains how the existing provisions of the ground water regulations, 20.6.2.3101 through 20.6.2.3114 NMAC, relate to the Proposed Rule. In some cases, the Proposed Rule either supplements or replaces provisions set forth in 20.6.2.3101 through 20.6.2.3114 NMAC, and this subsection clarifies the relationship between the Proposed Rule and the existing regulations governing discharge permits. Finally, Subsection D is necessary because it clearly establishes that compliance with the Proposed Rule does not relieve a copper mine facility from compliance with other applicable laws.

**B. 20.6.7.9 NMAC – FEES**

The WQA requires that the Commission, by regulation, shall “provide by regulation a schedule of fees for permits, not exceeding the estimated cost of investigation and issuance, modification and renewal of permits.” Section 74-6-5(K) NMSA 1978. In the Proposed Rule, NMED proposes the following requirements for fees from an applicant or permittee under 20.6.7.9 (“Section 9”):

**A.** The permittee of a copper mine shall remit an annual permit fee as follows: large copper mines, one hundred and twenty-five thousand dollars (\$125,000); medium copper mines, sixty-two thousand and five hundred dollars (\$62,500); and small copper mines, twelve thousand and five hundred dollars (\$12,500). Annual permit fees shall be due each August 1 after the effective date of the discharge permit until the discharge permit is terminated.

**B.** An applicant for a discharge permit, a discharge permit renewal, discharge permit renewal and modification, or discharge permit modification for a copper mine facility shall remit an application fee of one thousand dollars (\$1,000). The application fee is not refundable and may not be applied toward future discharge permit applications.

**C.** A permittee requesting a discharge permit amendment separate from a discharge permit renewal or modification shall remit with the request a discharge permit amendment fee of five hundred dollars (\$500). The permit amendment fee is not refundable and may not be applied toward future discharge permit applications or amendments.

**D.** A permittee requesting temporary permission to discharge pursuant to Subsection B of 20.6.2.3106 NMAC shall remit with the request a temporary permission fee of one thousand dollars (\$1,000). The temporary permission fee is not refundable and may not be applied toward future discharge permit applications or requests for temporary permission to discharge.

In my opinion, one of the most important aspects of ensuring that the environment and public are protected is to ensure that the regulators have sufficient resources to manage an

environmental program. The WQA provides for regulations establishing a schedule of fees for permits, not exceeding the estimated cost of investigation and issuance, modification and renewal of permits. Section 74-6-5(J) NMSA 1978. While NMED is in the best position to testify as to whether the fees set forth in Section 9 of the Proposed Rule are reasonable and sufficient to cover the costs of permitting program under the WQA relating to copper mining, I do believe that the new fees structure is better because it provides more predictability and consistency for both the permittee and NMED. Under the existing regulations, permit fees are paid following NMED's issuance of a discharge permit or permit renewal. Consequently, fee payments are irregular. The Proposed Rule provides for annual permit fees spread out over the term of the permit, and permittees and NMED will be able to better plan and budget under this method. In order to provide sufficient resources for NMED to carry out timely permitting and other activities under the WQA, Freeport has had to enter into supplemental funding agreements with NMED. The Proposed Rule regarding fees should eliminate the need for such agreements. For these reasons, Freeport supports the proposed new fee structures.

**C. 20.6.7.10 NMAC – GENERAL APPLICATION REQUIREMENTS FOR ALL COPPER MINE FACILITIES**

The WQA requires the Commission to adopt regulations setting “the dates upon which applications for permits shall be filed and designate the time periods within which the constituent agency shall, after the filing of an administrative complete application for a permit, either grant the permit, grant the permit subject to conditions or deny the permit.” Section 74-6-5(D) NMSA 1978. The Proposed Rule accomplish this statutory mandate at 20.6.7.10 (“Section 10”), wherein the rule provisions dealing with the application process basically fall into the following three general categories: (1) pre-application submission activities, (2) technical completeness activities, and (3) permit approval or denial activities. Generally, the Proposed Rule retains the

procedural requirements, including public notice and participation requirements under the Commission's existing discharge rules, while supplementing those requirements to address the specific technical requirements of the Proposed Rule.

### **1. Pre-Application Submission Activities**

The Proposed Rule at Section 10 sets forth a series of pre-application activities that an applicant must complete leading up to a submission of an application. These pre-application submission activities include:

**A.** Before submitting an initial application for a new copper mine facility, a prospective applicant shall schedule a pre-application meeting with the department to discuss the proposed location of the facility, the operating plans for the proposed process units, the physical characteristics of the facility's proposed site and other information that is required to be submitted in an application for a discharge permit. The pre-application meeting shall be held in Santa Fe, unless otherwise agreed to by the department. The pre-application meeting should occur no less than 60 days before the submission of the application.

**B.** Instead of the information required by Subsection C of 20.6.2.3106 NMAC, an applicant shall provide information and supporting technical documentation pursuant to this section and 20.6.7.11 NMAC.

**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 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.

**D.** For a copper mine facility that has been issued a discharge permit but has not been constructed or operated, a permittee shall submit to the department at least 270 days before the discharge permit expiration date an application for renewal pursuant to Subsection B of this section or a statement certifying that the copper mine facility has not been and will not be constructed and that no discharges have occurred or will occur. Upon the department's verification of the certification, the department shall terminate the discharge permit, if necessary, and retire the discharge permit number from use.

**E.** An application for a new, renewed, or modified discharge permit for a copper mine facility shall include the information and supporting documentation required by this section except that previously submitted materials may be included by reference in discharge permit renewal or modification applications provided that the materials are current, readily available to the secretary and sufficiently identified to be retrieved. The applicant shall attest to the truth of the information and supporting documentation in the application. The applicant shall provide to the department a hard copy (paper format) of the original signed completed application and all supporting documentation. The applicant shall also provide an electronic copy of the original signed application and all supporting documentation in portable document format (PDF) on a compact disc (CD) or digital versatile disc (DVD) or other format approved by the department.

With respect to Subsection A of Section 10, this pre-application meeting is a new procedural requirement for new copper mines. It is my understanding that this would apply to new copper mine operations, not individual facilities at an existing operation.

For example, a new impacted stormwater impoundment would not require a pre-application meeting. The pre-application meeting provides an opportunity for a prospective applicant and NMED get on the same page and engage in a dialogue prior to submitting an application, thereby saving the parties valuable time, money, and other resources.

Subsection B of Section 10 replaces the information required by Subsection C of 20.6.2.3106 NMAC and replaces it with the new information required by 20.6.7.11 NMAC of the Proposed Rule. In my opinion, Subsection B of Section 10 is necessary due to the new regulatory paradigm called for by the 2009 amendments to the WQA, as the Proposed Rule require more information to be submitted to NMED as part of the application process than what is called for in Subsection C of 20.6.2.3106 NMAC.

Subsections C and D basically require a copper mine facility to submit an application for renewal of a discharge permit at least 270 days before the discharge permit expiration date in certain circumstances. Currently, Subsection F of 20.6.3.3106 NMAC requires such information to be submitted 120 days before the discharge permit expires. Since the Proposed Rule implements a very different regulatory regime, I can agree that a longer time frame may be necessary while everyone is getting accustomed to the new discharge permitting program for copper mining. However, this may be an issue that needs to be re-visited at a later time through a subsequent rulemaking, as long lead time may lead to staleness of information. Nevertheless, it is important to get started with the new regulatory paradigm set forth in the Proposed Rule, and Freeport is willing to proceed for the time being with the 270 day requirement.

Subsection E of Section 10 discusses what to do with information previously submitted to NMED, and basically adds to the similar requirements set forth in Subsection F of 20.6.3.3106 NMAC. Subsection E prevents submission of duplicative information, thereby saving the parties time, money, and resources.

## **2. Technical Completeness Activities**

Under the existing discharge permit rules, Subsection A of Section 20.6.2.3108 NMAC, within 30 days of submitting a permit application, the applicant must provide public notice as specified in the rule. This public notice requirement will continue to apply for copper mines. The next step in the process under the existing rules is an administrative completeness determination under Subsection C of Section 20.6.2.3108 NMAC. The Proposed Rule at Section 10 set forth a series of application review and notice procedures specific to applications under the Proposed Rule:

**F.** Within 60 days of the department notifying the applicant in writing that the application is deemed administratively complete pursuant to Subsection A of 20.6.2.3108 NMAC, the department shall review the application for technical completeness and shall issue a written notice by certified mail to the applicant indicating whether the application is technically complete or is deemed to be deficient. An application must include the information required by Subsection B of this section to be deemed technically complete.

**G.** If the department determines that an application is technically deficient, the applicant shall have 60 days from the date of postal notice of the technical deficiency notification to provide the information required by this section. Upon request by the applicant and for good cause shown, the department may grant one or more extensions of time for the applicant to provide the information required by the technical deficiency notification.

(1) If an applicant for a new discharge permit does not provide all information required by this section to the department within 60 days of the date of postal notice of the technical deficiency, or within any extension granted by the department, the department may deny the application. The department shall provide notice of denial to the applicant by certified mail.

(2) If an applicant for a renewed or modified discharge permit does not provide all information required by this section to the department within 60 days of the date of postal notice of the technical deficiency, or within any extension granted by the department, the department may deny the application or may propose a discharge permit for approval consistent with the requirements of the copper mine rule. If the department denies the application, the department shall provide notice of denial to the applicant by certified mail.

(3) An applicant may supplement an application at any time during the technical review period. The department shall review the information for technical completeness within 60 days of receipt.

Note that Subsection F above requires a correction in that the second line should reference Subsection C of 20.6.2.3108 NMAC, rather than Subsection A. In order to understand how Subsections F and G fit into the existing regulatory framework, it is useful to begin by referring to 20.6.2.3108 NMAC (“Section 3108”). As set forth above, the Proposed Rule provides for some new and expanded requirements dealing with pre-application submission activities. Once the application is submitted, Section 3108 of the existing ground water regulations kicks in and requires NMED to determine whether the application is administratively complete 15 days after receipt of the application. Section 3108 discusses the various elements of what constitutes administrative completeness and how this decision is reached. Section 3108 of the existing rules and this Section of the Proposed Rule also must be read together with regard to the public notice and public participation requirements set forth in Section 3108, as the existing public notice and public participation requirements of the existing rules, as set forth in Section 3108, will continue to apply to permit applications for copper mines under the Proposed Rule.

An administrative completeness determination under Section 3108 means that all of the required elements of an application are included, but does not mean that NMED has reviewed the contents of the application for their technical contents. The Section 3108 language is somewhat ambiguous regarding technical review. Subsection H of Section 3108 states:

Within 60 days after the department makes its administrative completeness determination and all required technical information is available, the department shall make available a proposed approval or disapproval of the application for a discharge permit, modification or renewal, including conditions for approval proposed by the department or the reasons for disapproval.

The reference to “technical information” has resulted in some ambiguities as to what is exactly required for the NMED to issue a draft permit. In some instances, this ambiguity as to “technical information” has lead in a back and forth between a copper mining company and NMED that has lasted for months, if not years.

The Proposed Rule fixes the problems dealing with what is sufficient technical information in order for NMED to proceed with reaching a decision on and issuing a draft permit. Subsections F and G of Section 10 of the Proposed Rule establish a process for reaching a decision as to when an application is technically complete. The rest of the Proposed Rule also provides much greater detail and specificity regarding the technical contents of an application and requirements for approval. In my opinion, this process dealing with technical completeness is a big improvement over previous permitting program because it leads to clear expectations as to when and what is needed. Consequently, these technical completeness procedures are in the public interest because they lead to a transparent, predictable, and efficient permitting system.

### **3. Permit Approval or Denial Activities**

Section 10 of Proposed Rule ends with provisions that build on the permit approval and denial requirements set forth in 20.6.2.3108 NMAC. The relevant provisions include:

**H.** Within 60 days after an application is deemed technically complete or all information has been submitted to the department pursuant to a technical deficiency notification, the department shall make available a proposed approval of a discharge permit and a draft discharge permit or a notice of denial of a discharge permit application pursuant to Subsection H of 20.6.2.3108 NMAC and provide a copy to the mining and minerals division. The draft discharge permit shall contain applicable conditions specified in the copper mine rule, any conditions based on a variance issued for the copper mine facility, and any additional conditions imposed under Subsection I of this section. Requests for a hearing on the proposed approval of a discharge permit or denial of a discharge permit shall be submitted to the department pursuant to Subsection K of 20.6.2.3108 NMAC.

**I.** The department may impose additional conditions on a discharge permit in accordance with Section 74-6-5 NMSA 1978. If the department proposes an additional condition in a discharge permit that is not included in the copper mine rule, the department shall include a written explanation of the reason for the additional condition with the copy of the draft permit and proposed approval sent to the applicant pursuant to Subsection H of 20.6.2.3108 NMAC. Pursuant to subsection K of 20.6.2.3108 NMAC, written comments regarding the additional condition may be submitted to the department during the comment period and a hearing may be requested regarding the additional conditions.

**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.

Subsections H, I, and J are necessary because they tie the new provisions of the Proposed Rule back to the existing regulatory framework. For example, existing Section 3108 specifies the requirements for NMED's issuance of proposed decision and draft permit and for public notice of the draft permit. 20.6.2.3108.G NMAC. The public notice provisions regarding a proposed decision and draft permit continue to apply, but the Proposed Rule clarifies how the process will work with some new procedures required by the 2009 Amendments to the WQA. The new provisions which are substantially different from the existing regulatory framework deal with the imposition of permit conditions. In particular, the 2009 amendments to the WQA changed how permit conditions are imposed after regulations are adopted for a particular industry. This new statutory language states:

After regulations have been adopted for a particular industry, permits for facilities in that industry shall be subject to conditions contained in the regulations. Additional conditions on a final permit may be imposed if the applicant is provided with an opportunity to review and provide comments in writing on the draft permit conditions and to receive a written explanation of the reasons for the conditions from the constituent agency.

Section 74-6-5(D) NMSA 1978. Thus, Subsection I of Section 10 of the Proposed Rule outlines this new process for permit conditions and fits the permit approval or denial activities under the Proposed Rule (Subsections H, I, and J of Section 10) back into the existing regulations at 20.6.2.3108 NMAC.

**D. 20.6.7.11 NMAC – APPLICATION REQUIREMENTS FOR DISCHARGE PERMITS FOR A COPPER MINE FACILITY**

The existing ground water quality regulations at 20.6.2.3106 NMAC set forth some basic information that needs to be included as part of an application for a discharge permit. As mentioned above, the 2009 amendments to the WQA created a new regulatory paradigm that called for the WQCC to adopt regulation for the copper industry that specify the measures to be taken to prevent water pollutions. *See* Section 74-6-4(K) NMSA 1978. Consequently, if the

WQCC needs to adopt regulations for the copper industry that specify measures to prevent water pollution, it is important for information submitted as part of an application for a discharge permit be sufficiently detailed and specific to allow the regulatory agency a meaningful opportunity to review the underlying circumstances.

As will be set forth below, NMED proposes a long list of information necessary to include in an application for a new discharge permit or a renewal of an existing discharge permit, while an application for a modification of an existing permit is less extensive. The information listed in 20.6.7.11 NMAC (“Section 11”) of the Proposed Rule is intended to track the information needed to fit the new technical requirements in the rest of the Proposed Rule. Most of the information required by Section 11 typically would be provided as part of a permit application under the existing regulations or would be in NMED’s files from past applications, but proposed Section 11 is much more specific regarding the application requirements. It might be necessary to re-visit the extensive application requirements at some point in the future once NMED and copper mines get some experience in dealing with applications for copper mining under the Proposed Rule.

Subsection A of Section 11 of the Proposed Rule states:

**A.** An application for a new discharge permit or a renewal of an existing discharge permit shall include the applicable information in this section. An application for a modification of an existing discharge permit shall include the information in this section relevant to the proposed modification but need not include information listed in this section if the information was submitted to the department in the prior discharge permit application and the information has not changed since the discharge permit was issued. The department may require separate operational and closure discharge permits, or may combine operational and closure requirements in the same permit.

Subsection A is important because it sets forth how applications for new discharge permits and renewals of existing discharge permits are treated relative to modifications of existing discharge permits.

Subsection B of Section 11 of the Proposed Rule states:

**B. Contact information.** An application shall include:

- (1) applicant's name, title and affiliation with the copper mine facility, mailing address, and telephone number;
- (2) the name, mailing address and telephone number of each owner and operator of the copper mine facility;
- (3) if different than the applicant, the application preparer's name, title and affiliation with the copper mine facility, mailing address, telephone number and signature;
- (4) the mailing address and telephone number of any independent contractor authorized to assist the copper mine facility with compliance with the Water Quality Act and 20.6.2 NMAC and 20.6.7 NMAC; and
- (5) if the person submitting the application is not the owner or operator of the copper mine facility, a certification that the person is duly authorized to submit the application on behalf of the owner or operator.

Subsection B is important because it provides the necessary background information as who NMED needs to deal with in permitting a copper mine.

Subsection C of Section 11 of the Proposed Rule states:

**C. Ownership and real property agreements.**

- (1) An application shall include the copper mine facility owner's name, title, mailing address and phone number.
  - (a) If more than one person has an ownership interest in the copper mine facility or a partnership exists, then the applicant shall list all persons having an ownership interest in the copper mine facility, including their names, titles, mailing addresses and telephone numbers.
  - (b) If any corporate entity holds an ownership interest in the copper mine facility, the applicant shall also list the name(s), as filed with the New Mexico public regulation commission, of the corporate entity, and the corporate entity's registered agent's name and address.
- (2) If the applicant is not the owner of the real property upon which the copper mine facility is or will be situated, or upon which the discharge will occur, the applicant shall submit the name, address and telephone number of the owner(s), and a notarized statement from the owner which authorizes the use of the real property for the duration of the term of the requested permit.

Subsection C is necessary because it gives NMED and the public information as to who owns the copper mine and any associated real property agreements. This subsection distinguishes between the owner of the mining operation and the owner of real property, who may be different entities. For example, a copper mine may be established on federal public lands in accordance with federal law, on state lands under mining rights or leases, or on leased private lands. For large mining complexes, these ownership arrangements can be detailed and lengthy, and NMED does not need to review all of the contractual provisions governing the relationship between the owner/operator of the mining

operations and the owners of the underlying property. Consequently, the Proposed Rule requires property owners to verify that the mine operator has property rights for the duration of the permit, but does not require submission of all contractual documents between the parties. We have not had experience with this process, particularly obtaining a notarized statement from property owners. I expect that this process will work for privately owned property, but may not work for federal and state public lands. It may be best to limit paragraph (2) to private lands and to allow for other evidence of authorization to enter public lands for mining, such as a state lands lease or a federal mining claim or other use authorization.

Subsection D of Section 11 of the Proposed Rule states:

**D. Setbacks.** An application for a new copper mine facility shall include a scaled map of the proposed copper mine facility layout demonstrating that the copper mine facility meets the setback requirements of 20.6.7.19 NMAC.

Subsection D is necessary because it provides information on setbacks as required by 20.6.7.19 of the Proposed Rule.

Subsection E of Section 11 of the Proposed Rule states:

- E. Copper mine facility information and location.** An application shall include:
- (1) the copper mine facility name, physical address and county;
  - (2) the township, range and section for the entire copper mine facility; and
  - (3) the total acreage of the copper mine facility.

The information requested in Subsection E is necessary so that NMED and the public are aware of the exact location of the copper mine facility.

Subsection F of Section 11 of the Proposed Rule states:

- F. Public notice preparation.**
- (1) An application for a new, modified or renewed and modified discharge permit shall include the name of a newspaper of general circulation in the location of the copper mine facility for the display advertisement publication, the proposed public location(s) for posting of the 2-foot by 3-foot sign, and the proposed off-site public location for posting of the additional notice, as required by Subsection B of 20.6.2.3108 NMAC.
  - (2) An application for a renewed discharge permit that does not seek a discharge permit modification shall include the name of a newspaper of general circulation in the location of

the copper mine facility for the future display advertisement publication as required by Subsection C of 20.6.2.3108 NMAC.

The information requested in Subsection F is necessary because it incorporates Subsections B and C of 20.6.2.3108 NMAC in order to make sure the applicant is aware that compliance with such Subsections is not excluded from the Proposed Rule.

Subsection G of Section 11 of the Proposed Rule states:

**G. Pre-discharge total dissolved solids concentration in ground water.** An application shall include the pre-discharge total dissolved solids concentration, or range of concentration, from analytical results of ground water obtained from on-site test data from the aquifer(s) that may be affected by discharges from the copper mine facility. A copy of the laboratory analysis stating the pre-discharge total dissolved solids concentration shall be submitted with the application.

The information requested in Subsection G is necessary because it provides background data on pre-discharge total dissolved solids prior to any discharge, thereby allowing NMED a means to determine compliance with applicable standards.

Subsection H of Section 11 of the Proposed Rule states:

**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 and a description of the discharge locations and the methods and calculations used to determine that volume.
- (2) The identification of all sources of process water and tailings.
- (3) The estimated daily volume of process water and tailings generated.
- (4) Information regarding other waste discharges (i.e., domestic or industrial) at the copper mine facility. Permit identification numbers shall be submitted for those discharges that are already permitted.

Subsection H is important because it allows both the applicant and NMED the necessary information to understand the proposed activities that will occur at the facility. Also, maximum discharge volumes often are used as a basis for design of facilities.

Subsection I of Section 11 of the Proposed Rule states:

**I. Process water and tailings quality.** An application shall include estimated concentrations of process water and tailings slurry quality for the constituents identified in 20.6.2.3103 NMAC including the basis for these estimations.

Process water and tailings are important components of copper mining, and the ability to track and identify the estimated concentrations allow NMED and the copper mine to determine appropriate design, construction, and operating criteria for the facilities that manage these solutions.

Subsection J of Section 11 of the Proposed Rule states:

**J. Identification and physical description of the copper mine facility.** An application shall include the following information.

(1) A scaled map of the entire existing or proposed copper mine facility showing the location of all features identified in Paragraphs 2 through 11 of this Subsection. The map shall be clear and legible, and drawn to a scale such that all necessary information is plainly shown and identified. The map shall show the scale in feet or metric measure, a graphical scale, a north arrow, and the effective date of the map. Multiple maps showing different portions of the copper mine facility may be provided using different scales as appropriate to represent the facility. Documentation identifying the means used to locate the mapped objects (i.e., global positioning system (GPS), land survey, digital map interpolation, etc.) and the relative accuracy of the data (i.e., within a specified distance expressed in feet or meters) shall be included with the map. Any object that cannot be directly shown due to its location inside of existing structures, or because it is buried without surface identification, shall be identified on the map in a schematic format and identified as such;

(2) A description of each existing or proposed tailing impoundment, leach stockpile, process water and impacted stormwater impoundment, waste rock stockpile, and slag and residue pile including information about its location, purpose, liner material, storage or disposal capacity, and the methods proposed or used to prevent pollution of ground water;

(3) A description of each existing or proposed open pit and underground mine within the proposed copper mine facility and information about its location, depth, size, and acreage;

(4) A description of each existing or proposed material handling and processing facility including crushing, milling, concentrating, smelting and SX/EW facilities within the copper mine facility, and information about its location and proposed methods of process water handling and disposal;

(5) A description of existing or proposed sumps, tanks, pipelines and truck and equipment wash facilities, including information for each unit regarding its location, purpose, construction material, dimensions and capacity. For portable tanks or pipelines or those subject to periodic relocation, identify the areas within which they may be used;

(6) A description of the proposed method(s) to manage stormwater runoff and run-on to minimize leachate that may be discharged;

(7) A description of water wells and monitoring wells, including information for each well regarding its location, construction material, dimensions and capacity;

(8) A description of flow meters required pursuant to the copper mine rule or a discharge permit and fixed pumps for discharge of process water, tailings and impacted stormwater;

(9) A description of any surface water(s) of the state and any other springs, seeps, ditch irrigation systems, acequias, and irrigation canals and drains located within the boundary of the copper mine facility;

(10) A description of proposed sampling locations; and

(11) A description of all septic tanks and leachfields used for the disposal of domestic wastes.

The ability to identify and describe the various components and processing facilities at a copper mine is necessary to determine appropriate design, construction, and operating criteria to ensure compliance with applicable requirements.

Subsection K of Section 11 of the Proposed Rule states:

- 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 geological and lithological information which provides a geological 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.

Information regarding surface soil survey, geology, and hydrology allow the regulators and the copper mine the ability to understand the existing surface and subsurface conditions. Geologic information can be used to assess how water quality may be affected by contact with materials from different geologic formations. Hydrologic information is particularly important to assess how proposed mining operations may interact with surface water and ground water.

Subsections L and M of Section 11 of the Proposed Rule state:

- L. Location map.** An application shall include a location map with topographic surface contours identifying all of the following features located within a one-mile radius of the copper mine facility:
- (1) watercourses, lakebeds, sinkholes, playa lakes, seeps and springs (springs used to provide water for human consumption shall be so denoted);
  - (2) wells supplying water for a public water system and private domestic water wells;
  - (3) irrigation and other water supply wells; and
  - (4) ditch irrigations systems, acequias, irrigation canals and drains.
- M. Flood zone map.** An application shall include, if available, the most recent 100-year flood zone map developed by the federal emergency management administration (FEMA), flood insurance rate map or other flood boundary and floodway map with the copper mine clearly identified along with all 100-year frequency flood zones for the copper mine facility, and a description of any engineered measures used for flood protection.

These types of maps are important because they allow NMED and the copper mine the necessary background to determine whether there are any features or flood risks that should be considered in the discharge permit to protect ground water and ensure that protections are being provided relative to public health, welfare, and property.

Subsection N of Section 11 of the Proposed Rule states:

**N. Engineering design, construction and surveying.** Pursuant to 20.6.7.17 NMAC, 20.6.7.18 NMAC, 20.6.7.20 NMAC, 20.6.7.21 NMAC, 20.6.7.22 NMAC, 20.6.7.23 NMAC and 20.6.7.26 NMAC an application shall include:

- (1) plans and specifications for proposed new or modified tailings facilities, leach stockpiles waste rock stockpiles, and process water and impacted stormwater impoundments and associated liners;
- (2) plans and specifications for proposed new or modified tanks, pipelines, truck and equipment wash facilities and other containment systems; and
- (3) a stormwater management plan.

Information regarding engineering design, construction, and surveying is important because it provides NMED and a copper mine the necessary information to determine whether the specific Proposed Rule requirements for engineering design, construction and surveying are satisfied.

Subsection O of Section 11 of the Proposed Rule states:

**O. Material characterization plan and material handling plan.** An application shall include a material characterization plan and, if applicable, a material handling plan for all waste rock excavated at the copper mine facility pursuant to Subsection A of 20.6.7.21 NMAC.

These plans for material characterization and handling are specific requirements of Section 20.6.7.21 NMAC of the Proposed Rule.

Subsection P of Section 11 of the Proposed Rule states:

**P. Hydrologic conceptual model.** An application for a discharge permit for a new copper mine facility shall include a site hydrologic conceptual model providing:

- (1) a description of the hydrogeologic setting at the copper mine facility including ground water potentiometric maps, surface water drainages and flows, types of ground water and surface water recharge and its distribution, and hydrologic boundary conditions and divides;
- (2) the site hydrogeological setting relative to both local and regional hydrology and geology including appropriate cross-sectional diagrams depicting major geologic formations and structures, aquifers, and ground water depths;
- (3) potential sources of water contaminants including discharge types and their locations;

- (4) potential pathways for migration of water contaminants to ground water and surface water; and
- (5) any surface waters of the state that are gaining because of inflow of ground water that may be affected by water contaminants discharged from the copper mine facility.

The ability to provide a hydrologic conceptual model prior to discharging is an important assessment for evaluation of how a copper mine and, in particular, discharging facilities will relate to the underlying and surrounding ground water systems. Likewise, such information allows for development of appropriate monitoring systems in accordance with the Proposed Rule.

Subsection Q of Section 11 of the Proposed Rule states:

**Q. Waste minimization plan.** An application shall include a waste minimization plan to implement, as practicable, best management practices for minimization and recycling of process water and wastes generated at the copper mine facility to reduce the potential for impacts to ground water.

As stated within Subsection Q, a waste minimization plan is necessary to reduce the potential for impacts to ground water, thereby minimizing any potential impacts to health, welfare, environment, and property. It is not entirely clear what this entails as most of the solutions at a copper mine are copper-bearing, so there is incentive to recycle solutions. The main processes; SXEW and Concentrating, are water intensive and rely heavily on recycling of solutions.

Subsection R of Section 11 of the Proposed Copper Rules states:

**R. Monitoring wells.** An application shall include the location of all existing and proposed ground water monitoring wells pursuant to 20.6.7.28 NMAC.

Providing locations of all existing and proposed monitoring wells assist in ensuring that the specific Proposed Rule requirements for monitoring wells are satisfied.

Subsection S of Section 11 of the Proposed Rule states:

**S. Flow metering.** An application shall describe a copper mine facility's flow metering system pursuant to Paragraph (5) of Subsection C of 20.6.7.17 NMAC, Subsection E of 20.6.7.18 NMAC, and Subsections C and E of 20.6.7.29 NMAC, including:

- (1) the method(s) (i.e., pumped versus gravity flow) of process water discharge and stormwater transfer and handling;
- (2) the proposed flow measurement devices for each flow method and information about its type and capacity; and
- (3) the location of all existing and proposed flow meter required pursuant to the copper mine rule or a discharge permit.

Flow measurement is important in the copper industry because it assists with management of process solutions. While not all of these are important from a discharge permit standpoint, the ability to monitor flow rates and volumes from mine systems will provide information on compliance with discharge volume limits and specified design requirements.

Subsection T of Section 11 of the Proposed Rule states:

**T. Closure plan.** An application shall include a closure plan for all 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.

To the extent a copper mine has discharges to ground water, it is important that a copper mine plan ahead on how to manage such discharges. The closure plan will describe how the permit applicant will comply with the specific closure requirements of the Proposed Rule. For a large operation such as Chino or Tyrone, the ability to consolidate the closure plans into a single permit avoids the repetition that would occur if the closure plan was part of every discharge permit. Having one permit also facilitates coordination and approval with MMD. This provision is consistent with existing permitting practices for copper mines.

Subsection U of Section 11 of the Proposed Rule states:

**U. Financial assurance.** An application shall include a commitment to provide financial assurance for all required portions of a copper mine facility pursuant to 20.6.8 NMAC.

An applicant for a discharge permit needs to make a commitment to provide financial assurance; however, the final amount of financial assurance will be dependent

on the ultimate discharge permit that is approved. Therefore, the application should include commitment to provide financial assurance to give the public the necessary assurance that the appropriate resources will be in place to close a mining operation, regardless of who actually completes the closure plan. Because MMD has detailed financial assurance regulations for hardrock mining operations that overlap with the financial assurance that NMED may require as a condition of a discharge permit, the agencies must work together to minimize inconsistency, duplication, and red tape. It is Freeport's position that the rules enacted by the MMD should continue to govern the form and amount of financial assurance provided to both agencies. These MMD rules allow for up to 75% in the form of a parent company guarantee so long as the parent company meets one of the two financial tests included in the regulations. Freeport-McMoRan Copper & Gold Inc. has committed to providing information demonstrating that it continues to meet one of the financial tests to both MMD and NMED on both a quarterly basis (based on the Form 10-Q filed by Freeport-McMoRan Copper & Gold Inc. and on an annual basis (based on its Form 10-K). I understand that NMED intends to withdraw the proposed financial assurance rule relating to copper mines proposed as 20.6.8 NMAC. Consequently, this subsection likely will require some revision, and Freeport will comment on the revised language in its written rebuttal testimony.

Subsection V of Section 11 of the Proposed Rule states:

**V. Variances.** An application shall identify any issued or proposed variances for the copper mine facility and the sections of the copper mine rule affected by the variance(s).

To the extent that an applicant has or needs to vary from the Commission's regulations, it is in the public interest for such information to be disclosed in the application so interested parties can be aware of the reasons for such differences. I understand that

variances under the Proposed Rule will be addressed under the existing rule provision, 20.6.2.1210 NMAC.

Subsection W of Section 11 of the Proposed Rule states:

**W. Meteorological data.** An application shall include a plan to measure meteorological data at sites throughout the copper mine facility including precipitation, temperature, relative humidity, solar radiation, wind speed and wind direction.

A plan to measure meteorological data is necessary because it will provide information relating to storm water management and for closure plan designs.

**E. 20.6.7.14 NMAC – REQUIREMENTS FOR A DISCHARGE PERMIT AMENDMENT**

The starting point for understanding 20.6.7.14 NMAC (“Section 14”) is consideration of the term “discharge permit amendment.” Pursuant to 20.6.7.7(B)(19) NMAC, a “discharge permit amendment” is defined as:

(19) “Discharge permit amendment” means a minor modification of a discharge permit that does not result in a significant change in the location of a discharge, an increase in daily discharge volume of greater than ten percent of the original daily discharge volume approved in an existing discharge permit for an individual discharge location, a significant increase in the concentration of water contaminants discharged, or introduction of a new water contaminant discharged.

This term is important because it sets forth specific guidance on how to determine if a particular action by a permittee is an amendment or something more. Without such guidance, a regulator dealing with a request for a discharge permit amendment would have unfettered discretion to determine whether an amendment to a discharge permit is something that is minor. Accordingly, I believe that the definition of “discharge permit amendment” as set forth in 20.6.7.7(B)(19) NMAC is in the public interest because it provides necessary guidance so that decisions are made in a transparent manner.

In order to deal with a discharge permit amendment, NMED proposes the following requirements under 20.6.7.14 NMAC (“Section 14”):

- A.** A permittee may submit a request for a discharge permit amendment to the department at any time during the term of an approved discharge permit.
- B.** A permittee shall remit a fee pursuant to Subsection C of 20.6.7.9 NMAC with the request for a discharge permit amendment.
- C.** A discharge permit amendment shall be administratively reviewed and evaluated by the department and is not subject to public notice or a public hearing.
- D.** The department shall approve, disapprove or request additional information necessary for a determination regarding a discharge permit amendment within 30 days of receipt of a request.
- E.** The department shall provide notice of all discharge permit amendment approvals or denials to those persons on the facility-specific list maintained by the department who have requested notice of discharge permit applications.

Based on my experience, Subsections A through E of Section 14 are necessary to address minor adjustments that arise during routine operations that will not materially affect ground water quality or affect public health, welfare, environment or property. Consequently, there is no need for public notice or comment on minor adjustments to permit requirements. I also understand that the process is consistent with the current approach taken by NMED, but formalizes the limits on the permit amendment process. These new requirements allow a permittee to request a discharge permit amendment during the term of the approved discharge permit and pay a fee for its consideration. Thereafter, NMED must approve the request for a discharge permit amendment within a specific time frame. Although public notice and a hearing is not required for a discharge permit amendment, NMED does provide notice to parties in certain instances.

Subsections A through E of Section 14 are necessary because they provide a clear and efficient process on amending a discharge permit. Since a discharge permit amendment deals with minor modifications to a discharge permit, copper mining companies such as Freeport need the ability to make these minor changes in a quick and efficient manner, with clear time frames, and paragraphs A through E of Section 14 provide such a framework. The ability to quickly implement such amendments

maximizes environmental and ground water protection while still keeping the public informed.

**F. 20.6.7.19 NMAC– SETBACK REQUIREMENTS FOR A COPPER MINE FACILITY APPLYING FOR A DISCHARGE PERMIT**

NMED proposes the following set back requirements for a new copper mine facility under 20.6.7.19 NMAC (“Section 19”):

**A.** The setback requirements of this Section apply to a new copper mine facility for which an application for a discharge permit is received by the department after the effective date of the copper mine rule.

**B.** The setback requirements shall be measured as horizontal map distances.

**C.** The required setback distances shall be met as certified by the applicant as of the receipt date of the application.

**D.** If the setback requirements apply to a copper mine facility, an applicant or permittee shall not propose or construct a leach stockpile, waste rock stockpile, tailing impoundment, or process water and impacted stormwater impoundment that does not meet the setback as determined as of the receipt date of the application for a new discharge permit by the department.

**E.** Leach stockpile, waste rock stockpile, tailing impoundment, process water impoundment or impacted stormwater impoundment setback requirements.

(1) Leach stockpiles, waste rock stockpiles, tailing impoundments, process water impoundments or impacted stormwater impoundments shall be located:

(a) greater than 500 feet from a private domestic water well or spring that supplies water for human consumption; and

(b) greater than 1000 feet from any water well or spring that supplies water for a public water system as defined by 20.7.10 NMAC, unless a wellhead protection program established by the public water system requires a greater distance.

(2) The requirements of Subparagraph (a) of Paragraph (1) of this Subsection shall not apply to wells or springs that supply water to the copper mine facility for human consumption and are located within the property boundary of the copper mine facility.

(3) The requirements of Paragraph (1) of this Subsection shall not apply to wells that are constructed after a copper mine facility received a discharge permit for a leach stockpile, waste rock stockpile, tailing impoundment, process water impoundment or impacted stormwater impoundment.

(4) Setback distances shall be measured from the toe of the outer edge of a leach stockpile, waste rock stockpile, tailing impoundment, process water impoundment or impacted stormwater impoundment at its final design build out.

It is my understanding that the setback requirements are designed to protect private domestic water wells and springs supplying water for human consumption and to protect any water well or spring supplying water for a public water system. It is important to note the setback requirements such as those found in Section 19 are not

currently required pursuant to existing discharge permits. Therefore, Section 19 makes the Proposed Rule even more stringent than the existing regulatory framework.

**G. 20.6.7.23 NMAC – REQUIREMENTS FOR NEW PIPELINES AND TANKS**

Management of solutions and fluids is an important part of copper mining, and any kind of break in a pipeline or tank can be disruptive. Therefore, a copper mine has a big incentive to manage pipelines and tanks in a manner that maintains their integrity.

20.6.7.23 NMAC (“Section 23”) sets forth requirements for engineering, constructing, and operating new pipelines and tanks. These requirements are important because a variety of fluids are carried by pipelines and contained in tanks at a typical copper mine.

Paragraph A of Section 23 provides minimum design requirements for new tanks and pipelines containing process water or impacted stormwater. The applicant or permittee may use an alternative design for these new tanks and pipelines if a demonstration is made that the alternative design will provide an equal or greater level of containment. In particular, the paragraph A of Section 23 states:

**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.

The flexibility to make a demonstration for use of an alternative design is important because there may be situations where the design of new tanks and pipelines will depend on site-specific features of the operation. As long as the alternative design provides an equal or greater level of protection, the alternative design should be sufficient and accepted because it protects ground water quality.

The specific engineering requirements for new pipelines are set forth in Paragraph 1 of Subsection A of Section 23 and include:

(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

(c) 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 of secondary containment to contain and control leaks and spills including berms, placement within or drainage toward areas authorized for discharge of the conveyed fluids, and impoundments that are constructed consistent with the requirements of Subsection D of 20.6.7.17.D NMAC.

The engineering requirements for new pipelines are important because they require pipelines to be compatible with the solutions being conveyed. Pipelines outside the open pit drainage area have additional protections, including requirements for monitoring integrity and secondary containment systems. These engineering requirements for new pipelines provide for reduced monitoring requirements or no secondary containment systems if the new pipelines are inside the open pit surface drainage area and inside an area authorized for discharge of process water. This reduction is justified because the pit functions as a secondary containment system for any solutions. Current permits issued by NMED generally do not contain engineering design requirements for pipelines, although the Department has required review of engineering designs for some larger pipeline systems, such as portions of the Chino Mine's ten mile long tailings pipeline.

For section (c) in regards to the impoundments, I would recommend adding language that would not require that the impoundment be designed to meet the requirements of Subsection D of 20.6.7.17.D NMAC if any non-stormwater solutions (and solids) that flow to these impoundments are removed in a timely manner. The reason for this change is that these impoundments are contingency measures and will be empty except during upsets. However, they will fill with sediment due to precipitation events and will need to be cleaned out

periodically to ensure that capacity is maintained. Cleaning out a synthetically lined impoundment is difficult without damaging the liner. Making sure that the impoundment capacity is maintained and that solutions are removed in a timely manner will be more protective of ground water.

The specific engineering requirements for new tanks are set forth in paragraph A(2) of Section 23 and include:

- (2) **Tanks.** New tank systems shall meet the following requirements.
  - (a) Tanks shall be designed and constructed of steel, concrete or impermeable materials that are compatible with the particular contents that are contained within the tank and resistant to degradation by ultraviolet light where exposed to sunlight.
  - (b) A tank system shall have a constructed foundation consisting of a stable, level base free of rocks, debris, sharp edges or irregularities that could puncture, crack or indent the tank materials.
  - (c) A tank system shall be designed to prevent overflow and the collection of surface water run-on.
  - (d) An above-ground tank system shall be bermed to contain 110 percent of the volume of the largest tank within the system or the largest interconnected tanks.
  - (e) A below-grade tank system shall either be placed in such a manner that the side walls are open for visual inspection or the tank shall be designed with a secondary containment and leak detection system.

Similar to new pipelines, the requirements for new tanks systems mandate that the tank must be compatible with the contents contained in the new tank. The source of the 110 percent of volume requirement in (A)(2)(d) is standard practice and is similar to SPCC requirements under the Clean Water Act. NMED has not specified engineering design requirements for tank systems in discharge permits issued to copper mines under the existing regulations.

It is my understanding that Subsection B of Section 23 addresses the circumstances of how existing and new pipeline and tank facilities are constructed. If existing pipelines and tanks are working, they are not going to be subject to Section 23. The relevant rule language includes:

**B. Construction.**

- (1) **New pipeline and tank facilities.** Construction of a new pipeline or tank system shall be performed in accordance with the applicable requirements of Subsection A of 20.6.7.23 NMAC and 20.6.7.17 NMAC.
- (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.

Subsection B is important because it sets forth what needs to be done with respect to existing pipelines and tank facilities. The basis for the 10-year frequency for integrity testing for existing tanks is the Steel Tank Institute standards and guidelines. The same Steel Tank Institute and guidelines specify the level of inspection for a tank based on the level of risk. Because a tank placed on the ground surface is subject to potential corrosive decay of the tank bottom, a thorough inspection of the interior is required at least every 10 years. The existing rules and current permits do not specify requirements for inspection of tanks that could result in a failure which could lead to ground water impacts. So as written, these are more stringent and are more protective of ground water.

It is my understanding that Subsection C of Section 23 addresses the operational requirements for pipelines and tank systems. These requirements include:

**C. Operational requirements.** A permittee operating a pipeline or tank system shall operate the system pursuant to the following requirements, as applicable.

- (1) Pipelines and tanks shall remain within the area identified in the discharge permit.
- (2) Pipelines, tanks and secondary containment systems shall be inspected on a monthly basis.
- (3) The permittee shall maintain and operate a below-grade tank(s) to prevent overtopping of the tank(s).
- (4) Any evidence of leaks or spills of fluids, process water or tailings from a pipeline or tank system outside of permitted secondary containment systems or outside an area permitted for discharge shall be recorded and reported to the department pursuant to 20.6.2.1203 NMAC.
- (5) Any evidence of leaks or spills of fluids, process water or tailings from a pipeline or tank system inside of permitted secondary containment systems or inside an area permitted for discharge shall be recorded and reported to the department in the semiannual reports submitted pursuant to Subsection A of 20.6.7.29 NMAC.
- (6) Existing pipelines that do not meet the engineering requirements of Subsection A of 20.6.7.23 shall be tested for integrity at least once every five years. A pipeline testing plan for such pipelines shall be included in an application for renewal of a discharge permit for a copper mine facility.
- (7) Existing below-grade tanks that do not meet the engineering requirements of Subsection A of 20.6.7.23 NMAC shall be emptied and visually inspected for integrity at least once every five years.

(8) A written record of all pipeline and tank system inspections and integrity testing shall be maintained by the permittee for a period of at least five years.

(9) Any wastes generated from the cleaning of pipeline or tank systems shall be disposed of offsite in accordance with applicable laws or onsite in a manner approved by the department.

Subsection C is important because it establishes the minimum performance criteria for inspecting tanks and pipelines and reporting upsets.

Overall, the existing discharge permits for copper mines do not have a lot of specificity on the types of pipelines, sizes, or design methods. Section 23 deals with this situation by specifying the requirements for making sure the tanks and pipeline systems are working appropriately. The advantage of putting the requirements into rule language is that it lays out a plan and requires a copper mine to put some thought into being proactive through different systems on below-grade tanks, above-ground tanks, and pipelines.

In fact, Section 23 adds consistency over the current permitting process. Historically, pipelines and tanks have been handled in different ways depending on the discharge permit. Under the Proposed Rule, it adds some consistency on how such facilities are handled. In my opinion, Section 23 is a benefit to copper mining operations because it provides the necessary consistency in discharge permits. Discharge permits are issued in different intervals, and in the past, the treatment of pipelines and tanks varied and really depended on the permit writer. Section 23 will result in a consistent approach.

In Section A(6), I would propose changing the word “tested” to “evaluated” in the first sentence and changing “testing” to “evaluation” in the second sentence. Integrity testing implies pressure testing and there are a number of other methods that can be used to evaluate the integrity of pipelines. This gives some latitude to the operator to propose a pipeline evaluation plan that can incorporate pressure testing or other methodologies that will ensure integrity and still gives the agency the discretion to review and approve the plan.

#### **H. 20.6.7.26 NMAC – REQUIREMENTS FOR TRUCK AND EQUIPMENT WASHING FACILITIES**

A copper mine typically has two types of truck and equipment washing facilities. One of the facilities washes haul trucks and large pieces of equipment, and the other facility washes small vehicles and equipment.

The washing facilities for haul trucks and large equipment are typically near the truck maintenance shops and use high volume, high pressure fire hoses for washing mud off of the undercarriage of the haul trucks and sometimes the haul truck beds. The typical contaminants associated with washing haul trucks and large equipment include ore, waste rock, and other mined material. In addition, minor amounts of oil, grease, and antifreeze may be generated when washing the undercarriage of haul trucks.

The washing facilities for haul trucks and large equipment usually are located on concrete slabs with drains either in the middle or around the outside of the slab. The solutions are washed down a drain to a sump, where solids are separated from liquids. The solids are then managed as petroleum-contaminated soils, or if there is copper content in the solids, they would be placed back on a leach pad for copper recovery. The petroleum-contaminated soils (“PCS”) are managed offsite unless there is a state-approved permit for management of PCS onsite. At Freeport’s operations, everything goes offsite if it is not ore-bearing material. Meanwhile, the water is put back into the process water system.

Contaminants generated from washing small vehicles and equipment are managed similar to contaminants from washing haul trucks and large equipment. The solids are either placed on leach pads or taken off-site if they do not contain copper-bearing material, and water is placed back into the process water system.

20.6.7.26 NMAC (“Section 26”) of the Proposed Rule sets forth the engineering design, construction, and operational requirements for truck and equipment washing facilities. These requirements include:

**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.

(1) Truck and equipment washing shall be conducted on a concrete pad or a pad constructed of materials of equivalent or lower permeability designed to capture all wash water.

(2) Captured wash water shall freely drain from the containment pad and when necessary be conveyed to an oil water separator to remove oil and grease from the wash water.

(3) Wash water from the oil water separator shall be conveyed to a tank system designed and constructed pursuant to 20.6.7.23 NMAC, an impoundment meeting the requirements of Subsection D of 20.6.2.7.17 NMAC, or may be directed to the mine process water circuit for use.

**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.

**C. Operational requirements.** A permittee operating a truck or equipment wash facility at a copper mine facility shall operate pursuant to the following requirements.

(1) The truck or equipment wash facility shall remain within the area identified in the discharge permit.

(2) Wash water generated at the facility shall be contained within the designed containment pad, separator and tank system, impoundment or conveyance to the process water circuit.

(3) The tank systems associated with the facility shall meet the operational requirements of 20.6.7.26 NMAC.

(4) Any leaks or spills of wash water from the containment pad, separator, tank system or impoundment shall be recorded and reported pursuant to 20.6.2.1203 NMAC.

(5) Any wastes generated from the oil water separator or the tank system shall be disposed of offsite in accordance with applicable laws or onsite in a manner approved by the department.

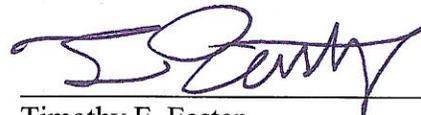
In my opinion, these requirements are reasonable. The new rules specify that inside the open pit surface drainage areas, the requirements are less controlling because the solutions ultimately report to the bottom of the pit where they are contained. Outside the open pit surface drainage area, there are stricter requirements to make sure a copper mine is capturing any solutions that could impact ground water.

Moreover, I believe the requirements of Section 26 are protective of ground water quality because they manage both the water and solids in a responsible manner and include them in the

rules. Under the previous regulatory frameworks, the discharge permits barely touched upon requirements for truck and equipment washing. By contrast, the Proposed Rule is detailed, consistent, and provides the necessary guidance to ensure heightened protections to ground water and the environment. I would propose that the descriptions in Section B(1) and B(2) be changed to read, "New Wash Facilities for Trucks and Equipment." and "Existing Wash Facilities for Trucks and Equipment."

**IV. CONCLUSION**

In conclusion, I urge the Commission to adopt the Proposed Rule with some minor changes as suggested in Freeport's testimony. The portions of the Proposed Rule described above generally codify requirements established in existing discharge permits through permit conditions imposed NMED, while adding new requirements intended to improve protection of ground water quality. This concludes my written direct testimony.

  
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Timothy E. Eastep