

Aquifer Protection Permit P-101679
 Place ID 1567, LTF 62085
 Significant Amendment
Freeport-McMoRan Sierrita Inc.

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an amendment to an aquifer protection permit for the subject facility that covers the life of the facility, including operational, closure, and post closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. This document gives pertinent information concerning the issuance of the permit. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards (AWQS) at the Point of Compliance (POC); and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology), to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer or to prevent pollutants from reaching the aquifer.

I. FACILITY INFORMATION

Name and Location

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|-----------------------------|---|
| Permittee's Name: | Freeport-McMoRan Sierrita Inc. |
| Mailing Address: | P.O. Box 527 Green Valley, AZ 85622 |
| Facility Name and Location: | Freeport-McMoRan Sierrita Inc. 6200 W. Duval Mine Road Green Valley, AZ 85622 |

Regulatory Status

The Freeport-McMoRan Sierrita Inc. mining operations are operating under an APP that was issued on June 29, 2007. Cyprus Mining Company acquired the property in 1986, and a pre-application meeting for the Aquifer Protection Permit (APP) was held on October 12, 1993. An application for an APP, dated September 7, 1994, was received by ADEQ on November 13, 1994, from Cyprus Sierrita Corporation. Subsequently, additional information was submitted by Cyprus Sierrita Corporation in support of the APP application. Cyprus Sierrita Corporation changed its name to Phelps Dodge Sierrita, Inc., in 1999 as a result of an acquisition. In April 2008, the Permittee's name was changed when Phelps Dodge Corporation was acquired by Freeport-McMoRan Inc. (formerly known as Freeport-McMoRan Copper & Gold Inc.).

Facility Description

Freeport-McMoRan Sierrita Inc. (Sierrita) is operating an open pit mine and mineral concentration facility which is located approximately 6 miles northwest of Green Valley, in Pima County, Arizona. Green Valley lies approximately 25 miles south of the city of Tucson, Arizona. Facilities at the Freeport-McMoRan Sierrita Inc. (Sierrita) mine, previously Phelps Dodge Sierrita, Inc., and before that Cyprus Sierrita Corporation, include conventional crushing and flotation followed by differential flotation, leaching and roasting of molybdenum disulfide, rhenium recovery, molybdenum disulfide production and packaging, molybdenum trioxide production and packaging, leach stockpiles, and solution extraction/electrowinning facilities.

Sierrita produces copper concentrate, cathode copper and copper sulfate, along with molybdenum products and rhenium products. Copper and molybdenum are the primary products produced by Sierrita. Copper and molybdenum disulfide are produced through conventional milling and froth flotation, and pure copper is produced through solution extraction and electrowinning. Copper sulfate is produced through solution extraction and crystallization. Molybdenum trioxide is produced through roasting. Rhenium is also recovered in the molybdenum roasting operations.

The Sierrita property consists of two open-pits: Sierrita-Esperanza pit, and a molybdenum satellite pit; a 115,000-ton-per-day concentrator, two molybdenum roasting plants, a rhenium plant, an oxide and low-grade sulfide stockpile leaching operation, and a copper sulfate plant. Ore production from each pit is highly variable; however the aggregate production is limited to the capacity of the plant operation. The mine is capable of producing up to 250 million pounds of copper and, as a co-product, 25 million pounds of molybdenum annually.

Domestic wastewater treatment is separately permitted under general permits, and is not permitted under this individual APP.

Amendment Description

ADEQ has reviewed and approved the following changes under this amendment:

- to update the closure strategy and revise the closure and post-closure costs for the Sierrita Tailings Impoundment (Facility D-01)
- add closure and post-closure costs for the B Pond (D-07), Launder Facility (D-39), and Duval Canal Impoundment (D-62) while removing closure and post-closure costs for the Truck Wash (D-16), SX-3 Drain Pond (D-31), and Blue Algae Ponds (D-58)
- an updated financial assurance mechanism

II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY

No changes to the existing BADCT are required as part of this amendment. A description of the BADCT used for each discharging facility can be found in the permit in Section 4, Table 4.1.1.

III. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS

Point(s) of Compliance

No changes to the points of compliance or the monitoring requirements are required as part of this amendment.

IV. STORM WATER AND SURFACE WATER CONSIDERATIONS

The mine and plant site areas are contained within the west flank of the Santa Cruz River Basin. The Santa Cruz River is an ephemeral stream through this reach. There are no nearby surface water bodies. The main surface water drainages through the project area are Demetrie and Esperanza Washes. Both drainages are ephemeral and flow in a southeast direction towards the Santa Cruz River. Stormwater and non-stormwater are collected in several small impoundments in Tinaja Wash and several un-named washes that flow into Esperanza Wash. Stormwater and non-stormwater from Amargosa Wash and stormwater from the upper Demetrie Wash are diverted through the lined Duval Canal into the Sierrita Tailing Impoundments.

V. COMPLIANCE SCHEDULE

The Compliance Schedule is provided in Section 3.0 of the permit.

VI. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

Technical Capability

Freeport-McMoRan Sierrita Inc. has demonstrated the technical competence necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A202(B).

This requirement is a part of an ongoing demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

Financial Capability

Freeport-McMoRan Sierrita Inc. has demonstrated the financial responsibility necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee is expected to maintain financial capability throughout the life of the facility. ADEQ approved the closure costs of \$202,708,189 and post-closure cost of \$13,448,550. The permittee provided financial capability for the estimated Net Present Value (NPV) of the closure and post-closure costs in the amount of \$170,599,667. The financial capability was demonstrated through A.A.C. R18-9-A203(C)(8).

ADEQ is currently allowing the use of NPV for this permit while ADEQ holds stakeholder meetings and reviews the use of NPV for demonstration of financial capability.

Zoning Requirements

Mining activity of greater than five contiguous acres is exempt from zoning requirements pursuant to A.R.S. § 11-812.

VII. ADMINISTRATIVE INFORMATION

Public Notice (A.A.C. R18-9-108(A))

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft permit or other significant action with respect to a permit or application. The aquifer protection program rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to ADEQ. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit.

Public Comment Period (A.A.C. R18-9-109(A))

The Department shall accept written comments from the public prior to granting the significant amendment. The written public comment period begins on the publication date of the public notice and extends for 30 calendar days. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C. R18-9-109(B))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting process.

VIII. ADDITIONAL INFORMATION

Additional information relating to this proposed permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division – Water Permits Section
Attn: Vimal Chauhan
1110 W. Washington St., Mail Code 5415B-3
Phoenix, Arizona 85007
Phone: (602) 771-4362