

Freeport-McMoRan Sierrita Inc.
Aquifer Protection Permit No. 101679
Place ID No. 1567, LTF No. 74438
SIGNIFICANT AMENDMENT

I. Introduction:

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit (APP) 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. 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.

II. Facility Location:

The FMI Sierrita Mine is located near Green Valley, Arizona, Pima County.

III. Facility Description:

Freeport-McMoRan Sierrita Inc. (Sierrita) is an open pit mine and mineral concentration facility. Facilities 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.

IV. Amendment Description:

The purpose of this amendment is to construct a buttress on the south side of the Sierrita Tailings Impoundment (STI) to achieve acceptable factors of safety for slope stability; to reduce the maximum crest elevation for the STI from 4,350 feet above mean sea level (ft-amsl) to 3,710 ft-amsl; and require additional slope stability evaluation and demonstration that the south wall and supporting structures meet the factor of safety requirements prior to raising the STI crest above elevation 3,585 ft-amsl. The permit requires a biennial STI summary report to include a summary of STI buttress construction activities for the reporting period including maps and construction completion documents, interpretation and evaluation of the inspections and monitoring data including maps and graphs, and discussion of any updates to the STI stability model.

No other discharging facilities at the mine will be modified.

V. Regulatory Status

There are no current enforcement actions.

VI. Best Available Demonstrated Control Technology (BADCT):

The BADCT requirements for the discharging facilities are not changing from the current permit. The buttress design for the Sierrita Tailings Impoundment assures the facility meets the BADCT requirements for slope stability. The storm water controls and runoff pond designs assure adequate storage capacity to contain storm water runoff from the 100-year, 24-hour storm event and prevent erosion.

VII. Compliance with Aquifer Water Quality Standards (AWQS):

No changes to the points of compliance or the monitoring requirements are required as part of this amendment. Compliance with AWQS will continue to be monitored at the existing POCs.