

**Freeport-McMoRan Sierrita Inc.**  
Aquifer Protection Permit No. 101679  
Place ID No. 1567, LTF No. 94253  
**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 make the following changes:

- 1- Incorporate the Twin Buttes Mine property and the provisions of APP No. P-100408, into the Sierrita Mine Area-Wide APP No. P-101679.
- 2- Removal of two current Point of Compliance (POC) monitor wells (MH-21 and MH-22) from APP No. P-101679. The removal of the wells will simplify the groundwater monitoring requirements at Sierrita without degrading the quality or intent of the monitoring program.
- 3- The reclassification of the SX-1 Drain Pond from a process solution pond to a non-stormwater pond. The pond reclassification will reflect the actual use of the pond next to a facility where process solutions are more efficiently diverted to other process solution ponds.
- 4- The application also provides notification to ADEQ of the need and intent to replace three other POC wells (MH-14, MH-15W and MH-16W) due to poor well condition and declining groundwater levels.
- 5- The permit also authorizes activities to close the EW Plant Area facilities and Historic Equipment Shop Area facilities at the Twin Buttes Mine.

**Rationale for Amendment Category:**

The proposed amendment meets the definition of a significant permit amendment per R18-9-A211(B) and therefore is categorized as “Significant”.

**V. Regulatory Status**

The facility was last inspected on July 23, 2021. Several potential deficiencies were noted, and the permittee worked with the Inspections and Compliance Unit to get these addressed. A letter was sent to the permittee on October 14, 2022, which closed the case.

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.

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

Two POC wells (MH-21 and MH-22) will be removed as part of this permit amendment. Compliance with AWQS will continue to be monitored at the existing POCs.