



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

Sent Via Email

August 18, 2021
VRP 22-033

Mr. David Rhoades
President and General Manager
Freeport-McMoRan Sierrita Inc.
P.O. Box 527
Green Valley, AZ 85614-0527

RE: Notice of Site Closure
Freeport Sierrita Mine
6200 W. Duvall Mine Road
Green Valley, Arizona
VRP Site Code: 100073-03

Dear Mr. Rhoades:

The Arizona Department of Environmental Quality (ADEQ) Voluntary Remediation Program (VRP) hereby grants Freeport-McMoRan Sierrita Inc. (Freeport) a **Notice of Site Closure** for the Freeport Sierrita Mine (the Site) in Green Valley, Arizona. The VRP issues this **Notice of Site Closure** for completion of all investigations approved by the VRP pursuant to Arizona Revised Statutes (A.R.S.) §§ 49-175 and 49-177.

OVERVIEW

- Site Location:
Freeport Sierrita Mine, 6200 W. Duvall Mine Road, Green Valley, Arizona.
- Date Accepted into VRP:
June 19, 2007
- Applied Regulatory Levels:
 - Residential Soil Remediation Levels (SRLs)
 - Site-Specific SRLs (SS-SRLs)
 - Groundwater Protection Levels (GPLs)

- Areas of Site Investigated in the VRP:

From 2007 through 2019, Freeport investigated areas associated with the Former Copper Leach Electrowinning and Regeneration (CLEAR) Plant and the Former Esperanza Mill. Although there are Aquifer Protection Permit (APP) Program-regulated facilities within these areas, they were excluded from the VRP, and only non-APP-regulated areas were evaluated.

- Contaminants of Concern:

The contaminants of concern (COCs) evaluated at the mine varied by investigation area, but altogether included antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, molybdenum, nickel, radium-226, radium-228, selenium, thallium, uranium-235, uranium-238, and zinc.

- Closure Documents Issued:

1. **No Further Action Determination**¹ for antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, molybdenum, nickel, selenium, thallium, and zinc in soil issued for the CLEAR Plant Training Facility in June 2013.
2. **No Further Action Determination**² for arsenic, copper, and lead in soil issued for the CLEAR Plant Paving Project in April 2016.
3. An **Administrative Closure**^{3,4} issued for the remainder of the VRP-regulated areas⁵ of the CLEAR Plant and Esperanza Mill in June 2020. Closure was based upon evaluation of soil data and the results of a human health risk assessment which concluded:
 - There are no risks to human health associated with current and/or future outdoor commercial/industrial workers, future trespassers, or future construction workers from the soil and sediment from site COCs in the areas evaluated.
 - There is no evidence of a threat to surface water from the COCs emanating from the areas evaluated.
 - There is no evidence of a threat to groundwater from the COCs emanating from the areas evaluated.

¹ For more information, reference VRP 13-308: “*No Further Action (NFA) Approval - Soil; Freeport Sierrita Inc. – Clear Plant Training Facility Area*”, dated June 14, 2013.

² For more information, reference VRP 16-204: “*No Further Action Determination for Arsenic, Copper, and Lead in Soil; Freeport Sierrita Inc. – Clear Plant Paving Project*”, dated April 22, 2016.

³ An Administrative Closure was issued in lieu of an NFA. Historically, the VRP would issue an Administrative Closure (now called a Notice of Site Closure) when a Volunteer satisfied all of the requirements of A.R.S. §§ 49-175 and 49-177, but was unable to satisfy the requirements of A.R.S. § 49-181 for an acceptable reason. In the case of Sierrita Mine, an Administrative Closure was issued in lieu of an NFA for the CLEAR Plant and Esperanza Mill because the VRP did not require a Declaration of Environmental Use Restriction (DEUR) on the mill areas, given the entirety of the Sierrita Mine remains an active mine with strict controls in place to prevent trespass and residential construction. As such, placing a deed restriction (a DEUR) on the mine provides no additional protection to human health and the environment. The VRP has determined there is no benefit to requiring a DEUR on an active mine where use will not change until the mine moves into post-closure and other regulatory requirements take effect. As such, because A.R.S. § 49-152(C) was not met, the closure requirements of A.R.S. § 49-181 were not be met, thereby precluding issuance of an NFA. The Administrative Closure was developed and issued with the intent it would carry the same assurances as an NFA, whereby A.R.S. §§ 49-175 and 49-177 must be, and were, satisfied by the Volunteer.

⁴ For more information, reference VRP 20-134: “*Permission to Proceed with Request for Administrative Closure*”, dated March 17, 2020 and VRP 20-170: “*Administrative Closure*”, dated June 30, 2020.

⁵ These areas included the Former CLEAR Plant, Former Evaporation Pond, and the Old D Pond, the Former Esperanza Mill, the Former C Pond and C Pond Spoils, the Former Raffinate Pond, and the Former Laydown Yard.

By issuing this **Notice of Site Closure**, the VRP officially closes the Freeport Sierrita Mine VRP Site. This completes the requirements for the remedial actions approved pursuant to A.R.S. § 49-177.

If you have any questions or concerns, please feel free to contact me at 602-771-1612.

Regards,



Scott Green, Manager
Voluntary Remediation Program

cc: William Hart, FMI – *sent via email*
Katy Brantingham, ARCADIS – *sent via email*