

Cyprus Tohono



Reclamation at Cyprus Tohono

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July 7, 2009

The Cyprus Tohono Mine southwest of the Arizona town of Case Grande is on land leased from the Tohono O'odham Nation. The Tohono O'odham, or "Desert People," is one of the largest Native American reservations, covering more than 4,600 square miles and extending into Mexico. The mine is in care and maintenance, although some copper production has occurred during good market conditions by processing copper contained in existing heap leach stockpiles.

- The processing of copper-bearing ore required that it be crushed and ground as part of a process called concentrating. After copper minerals are removed from ore, the residual – a fine, sandy material – is transported as slurry and permanently placed within large tailings impoundments. The water is collected and recycled.
- The company began reclamation work here in 2007, which involved moving materials from old evaporation ponds and old tailings impoundments from former copper-mining operations to a new area that is protected by a plastic liner. This site, 3.5 miles away, has been covered by an engineered soil cap and was reseeded with native vegetation. Both the former area and the new location have a natural contour. Work was completed in November 2008.
- In addition, water seeping from the tailings impoundments or evaporation ponds migrated down gradient, resulting in sulfate impacted groundwater. The company is providing alternative water supplies to replace tribal wells that had been impacted by sulfates.
- Sulfates can be produced when sulfide minerals, such as those found naturally at Cyprus Tohono and elsewhere, are exposed to air and water. Most sulfates dissolve readily in water. Sulfate is not considered hazardous by environmental regulations but can affect the color, taste and odor of water. Ingestion of water with high concentrations of sulfate is known to have a laxative effect. There are locations in Arizona, as well as other states, with elevated levels of naturally-occurring sulfate in groundwater.
- To address longer-term issues related to groundwater, the company is cooperating with the EPA and the Tohono O'odham Nation in the development of a non-listing Groundwater Remedial Investigation/Feasibility Study to be implemented under an agreement called an Administrative Order on Consent (AOC).
- Once the AOC is signed, the company will continue ongoing studies of potential groundwater impacts from operations in the area, and will eventually implement corrective actions, when necessary.



What is the purpose of reclamation?

Tailings impoundments and rock stockpiles may contain sulfide minerals that can react with storm water runoff to potentially impact surface and groundwater. Capping these sites with soil, promoting vegetation growth and managing storm water runoff from these sites, will help to protect surface and ground waters for future generations.