

Azurite Mine  
Aquifer Protection Permit No. P-513025  
Place ID 143689, LTF No. 90091

**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. Permittee**

Gold Paradise Peak, Inc.

**III. Facility Name & Location:**

Azurite Mine  
21 miles south of Prescott on Senator Highway  
Potato Patch , AZ

**IV. Facility Description:**

Gold Paradise Peak, Inc. (GPPI) proposes to mine elemental gold contained in lenticular veins, using surface and near surface excavation methods at the Sundance Property located approximately 2 miles northeast of the Azurite Mine. Ore will be excavated and temporarily stockpiled on the Sundance Property (permitted separately under Type 2.02 General Permit No. 513603). The ore will then be hauled by dump truck to the Azurite Mine for crushing and processing.

The mill located at the Azurite Mine, will consist of a crushing circuit and gravity table. The ore will be fed into the crushing circuit, two impactors and a vibrating screen. Once the ore material is crushed, and reduced down to sand size with appropriate mesh, the screened sand will be mixed with water inside an agitator. The only chemical that will be used in the process is a flocculent. Centrifuges and shaker tables will then extract the minerals from the mixed slurry. The remaining tailing material will be hauled and placed temporarily on an APP exempt Concrete Settling Area consisting of a concrete settling pad and adjoining concrete settling pond. Material will first be placed on the concrete settling pad, where residual water will then drain from the tailing material, down the slope to the adjoining concrete settling pond. Loader operators will pick up and transport the dewatered tailing material and place it in the Tailings Storage Facility (TSF) for permanent storage.

Water from the concrete settling pond will be pumped to on-site dewater tanks/separator tanks. Solids that settle out from the dewater tanks/separator tanks will be returned to the concrete settling pad, and excess water will be routed to an APP exempt Concrete Process Water Pond. From the Concrete Process Water Pond, water will be pumped to the mill for use in the mill.

Currently, two small temporary ore stockpiles are located north of the mill/processing area. GPPI plans to remove and close these stockpiles within the next 12 months and eliminate all discharges from this area to the greatest degree practicable. Once these two stockpiles on the Azurite Mine are depleted, GPPI will apply for Clean Closure, pursuant to A.R.S. §49-252.C, for the area where the ore was stored. Ore will not be stored at the Azurite Mine in the future.

**V. Best Available Demonstrated Control Technology (BADCT):**

Approximately 70,000 tons of tailings will be placed on a single 60-mil high-density polyethylene (HDPE) liner underlain by 12 inches of prepared subgrade.

Currently there are two facilities, the TSF and an ore pile storage area, located at the Azurite Mine. Within the ore pile storage area, there are currently two small ore stockpiles. The ore pile storage area is located north of the mill/processing area. Each of the two ore stockpiles covers an area of less than 1,200 square feet. The ore piles are covered with tarps to protect them from wind and rain. These ore stockpiles are temporary, and within the next 12 months, GPPI plans to process the ore currently stored on the Azurite Property, then conduct closure activities to permanently close the ore pile storage area.

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

The pollutant management area (PMA) is defined and described in A.R.S. §49-244.1 as “the limit projected in the horizontal plane of the area on which pollutants are or will be placed.” The PMA includes horizontal space taken up by a liner, dike or other barrier designed to contain pollutants in the facility. The PMA for the Azurite Property is proposed to circumscribe the two (2) ore stockpile areas, the process water impoundment, and the TSF. Figure 3 shows the delineation of the PMA for the Azurite property. There is no PMA for the Sundance property.

The Discharge Impact Area calculation is provided in Attachment M of the application. Attached Figure TM-1 shows the length of the 5.2-mile extent of the calculated DIA and the location of the two private wells. DIA calculations were conducted by CEC for the Gold Paradise Peak, Inc. (GPPI) Azurite Property that resulted in an estimated maximum travel distance (within the shallow alluvial aquifer) of 4.0 miles over a period of five (5) years. The beginning point of the travel distance is assumed as the proposed non-stormwater impoundment located on the Azurite Property. The travel path follows the streambed topography. A second calculation was conducted by CEC that incorporates the past 1-1/2 years of operation at the Azurite Property (prior to submittal of the APP Application). The result of the second calculation was that water would flow up to 5.2 miles in the shallow alluvial aquifer in 6-1/2 years.

Compliance with AWQS will be demonstrated through a discharge characterization of process fluid as required by Compliance Schedule Item (CSI) #7. The system is a closed system with a

low risk of discharging to the environment, therefore groundwater monitoring is not required at the Conceptual POC location at this time.