

FACT SHEET

(Pursuant to Nevada Administrative Code (NAC) 445A.401)

Permittee Name: **Red Widow Mining Company, Inc.**

Project Name: **May Turquoise Mine**

Permit Number: **NEV2008102 (Renewal 2015, Fact Sheet Revision 00)**

A. Location and General Description

Location: The **May Turquoise Mine** is located on the west side of Crescent Valley, along the eastern pediment of the Shoshone Range, in the Bullion Mining District of east central Lander County, Nevada, within a portion of the southwest ¼ of Section 28, Township 29 North, Range 47 East, Mount Diablo Baseline and Meridian, approximately six (6) miles southwest of the town of Crescent Valley. The project may be accessed by traveling approximately 40 miles west from Elko, on Interstate Highway 80, to the Beowawe interchange exit #261; then southwest on paved Nevada State Route 306 approximately 26 miles, through the communities of Beowawe and Crescent Valley, to Indian Creek; continuing west approximately two (2) miles on a dirt road along Indian Creek; and then north about one (1) mile on a dirt road to the Project site.

General Description: The Project is permitted as a physical separation facility in accordance with Nevada Administrative Code 445A.414 to extract turquoise-bearing material from an existing small open pit. Production will be weather dependent and will total less than 10,000 tons of turquoise ore per year. Portable equipment will be used for beneficiation. No chemicals are approved for use in the process and make-up water will be transported to the site and recovered from the process in clay-lined ponds prior to recirculation through the process circuit. The proposed Project will create approximately 1.5 acres of new surface disturbance over an estimated mine life of ten (10) years.

B. Synopsis

The May Turquoise Mine was originally operated in the 1960's by Elmer Shroeder. The new mining operation proposed, by the Red Widow Mining Company (Permittee), will consist of expanding the existing open pit using 30-pound and 90-pound jack-hammers and possibly a bulldozer. No blasting of pit material is anticipated. Ore and waste rock will be removed from the pit floor with a backhoe. Over the life of the proposed operation, the pit footprint will be expanded, as a lay-back into the hillside, from approximately 0.3 acres to about 0.9 acres. The May Turquoise Mine will be operated seasonally, at a rate of less than 10,000 tons of turquoise ore per year.

Waste rock will be placed adjacent to an existing waste rock storage facility (WRSF) located immediately southeast of the open pit. During the proposed project life of ten (10) years, the footprint of the existing WRSF is anticipated to increase from approximately 0.4 acres to approximately 0.9 acres. The maximum height of the WRSF is anticipated to reach 30 feet. The WRSF slopes will be re-graded to 3horizontal:1vertical at closure. Meteoric Water Mobility Procedure, Profile II analytical results for an ore sample indicate a slight exceedance of Profile I reference values for aluminum and arsenic. Data from adjacent sites indicate these constituents occur at naturally elevated concentrations in regional background samples. Based on the analytical test results provided and the depth to groundwater in the area (see below), the ore and waste are not believed to pose a potential to degrade waters of the state.

Ore will be fed with the backhoe to a portable trommel located within the open pit. The trommel has a design capacity of 15 cubic yards per hour. Make-up water to rinse the ore, transported to the site and stored in a 5,000 gallon water truck, is fed to the trommel at a rate of approximately 100 gallons per minute (gpm). No chemicals are approved for use in the process.

The coarse ore fraction will be carried from the trommel on a 40-foot long conveyor to the hand-sorting area where the turquoise will be collected. Process water and fine reject material will discharge from the trommel through a chute to a Settling Pond where the suspended solids can settle out.

The approved Settling Pond measures approximately 15 feet wide, 10 feet long, and five (5) feet deep. The native soils exhibit percolation rates ranging from 7×10^{-4} cm/sec to 1.6×10^{-8} cm/sec. Confirmation of the permeability during construction is not required by the Division. Additionally, the pond will include a 3-4-inch thick layer of bentonite clay as an amendment to minimize fluid loss from the pond.

From the Settling Pond, the clarified process water will decant to the Recirculation Pond. The proposed Recirculation Pond measures approximately 15 feet wide, 10 feet long, and 5 feet deep. Like the Settling Pond, the Recirculation Pond will include a 3-4-inch thick layer of bentonite clay to minimize fluid loss. Make-up water can be added at the pond prior to pumping, at a rate of up to 100 gpm, back into the process circuit at the trommel.

Coarse reject material from the turquoise hand-sorting operation and fines material removed from the Settling Pond will be placed on the WRSF with the backhoe. No backfilling of the open pit is anticipated, although historic underground workings that may be encountered during open pit mining will be backfilled at closure.

Operations will generally cease during winter due to lack of access. During any temporary closure period, the ponds will be emptied as practical and the trommel and other portable equipment will be removed from the site. The access road will be bermed to prevent public access.

A stormwater diversion will be constructed upgradient of the open pit to divert any stormwater surface flow away from the approved facility. Other Best Management Practices will be incorporated as necessary to protect the integrity of the facility and to prevent degradation of waters of the state.

C. Receiving Water Characteristics

There are no surface waters within one-half mile downgradient of the project area. The nearest surface water is Indian Creek, which is located 1 mile to the south and exhibits ephemeral flow.

The closest downgradient groundwater well is located 1.5 miles to the east and the next closest is approximately two (2) miles to the southeast. Static water levels in the wells have been measured at 162 and 176 feet below ground surface (bgs), respectively. Based on the available information, groundwater in the Project area is estimated to be at a depth of at least 150 to 200 feet bgs.

Until a nearer water source can be obtained, make-up water will be transported from the Hot Spring Fish Pond located in Crescent Valley. Analysis of the water for the Bureau of Mining Regulation and Reclamation (BMRR) Profile I constituents reports the water has a very slightly alkaline pH and elevated fluoride. Regional water quality data in Division files indicates fluoride at elevated levels is a natural occurrence in local groundwater.

D. Procedures for Public Comment

The Notice of the Division's intent to issue a Permit authorizing the facility to construct, operate, and close, subject to the conditions within the Permit, is being sent to the **Battle Mountain Bugle** for publication. The Notice is being mailed to interested persons on the Bureau of Mining Regulation and Reclamation mailing list. Anyone wishing to comment on the proposed Permit can do so in writing within a period of 30 days following the date of public notice. The comment period can be extended at the discretion of the Administrator. All written comments received during the comment period will be retained and considered in the final determination.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected intrastate agency, or any interested agency, person

or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.403 through NAC 445A.406.

E. Proposed Determination

The Division has made the tentative determination to issue the Permit.

F. Proposed Limitations, Schedule of Compliance, Monitoring, Special Conditions

See Section I of the Permit.

G. Rationale for Permit Requirements

The facility is located in an area where annual evaporation is greater than annual precipitation. Therefore, it must operate under a standard of performance which authorizes no discharge(s) except for those accumulations resulting from a storm event beyond that required by design for containment.

The primary method for identification of escaping process solution will be placed on required routine monitoring and periodic Division inspections. Specific monitoring requirements can be found in the Water Pollution Control Permit.

H. Federal Migratory Bird Treaty Act

Under the Federal Migratory Bird Treaty Act, 16 U.S. Code 701-718, it is unlawful to kill migratory birds without license or permit, and no permits are issued to take migratory birds using toxic ponds. The Federal list of migratory birds (50 Code of Federal Regulations 10, 15 April 1985) includes nearly every bird species found in the State of Nevada. The U.S. Fish and Wildlife Service is authorized to enforce the prevention of migratory bird mortalities at ponds and tailings impoundments. Compliance with State permits may not be adequate to ensure protection of migratory birds for compliance with provisions of Federal statutes to protect wildlife.

Open waters attract migratory waterfowl and other avian species. High mortality rates of birds have resulted from contact with toxic ponds at operations utilizing toxic substances. The Service is aware of two approaches that are available to

prevent migratory bird mortality: 1) physical isolation of toxic water bodies through barriers (e.g., by covering with netting), and 2) chemical detoxification. These approaches may be facilitated by minimizing the extent of the toxic water. Methods which attempt to make uncovered ponds unattractive to wildlife are not always effective. Contact the U.S. Fish and Wildlife Service at 1340 Financial Boulevard, Suite 234, Reno, Nevada 89502-7147, (775) 861-6300, for additional information.

Prepared by: Joe Sawyer
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