

FACT SHEET

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

Permittee Name: **Carico Lake Mining, L.L.C.**

Project Name: **Carico Lake Turquoise Mine**

Permit Number: **NEV2009101**

Review Type/Year/Revision: **Renewal 2015, Revision 00**

A. Location and General Description

Location: The Carico Lake Turquoise Mine is located on the west side of Carico Lake Valley, on the east side of the Shoshone Range, in east-central Lander County, Nevada, within portions of Sections 26, 35, and 36, Township 26 North, Range 44 East, Mount Diablo Baseline and Meridian, approximately 31 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 31 miles, through the communities of Beowawe and Crescent Valley, to the intersection with the Lander County gravel road located approximately ½ mile north of the Pipeline Mine Security Gate. From the intersection, follow the County Road through the Fillipini Ranch, south approximately 8.25 miles along the eastern edge of Carico Lake Valley, onto a gravel by-pass road across the Filippini Ranch to the west side of the valley 1.25 miles, south 2.5 miles, then approximately 2.5 miles west along the graded mine access road to the facility.

General Description: The Project is permitted as a physical separation facility in accordance with NAC 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. Make-up water will be transported from a well owned by the Filippini Ranch to the site. Process water is recovered in high-density polyethylene (HDPE)-lined ponds prior to recirculation through the process circuit. The proposed Project will occupy approximately 19 acres of combined existing and new surface disturbance and operate for an estimated 10 years. The Project is located on Public Land administered by the U.S. Bureau of Land Management – Battle Mountain District office.

B. Synopsis

The Carico Lake Turquoise Mine has operated sporadically since the early 1950's. The four (4) lode mining claims that comprise the Facility are owned by

Ernest Montoya, President, Carico Lake Mining, L.L.C. (Permittee). The mining operation will consist of removing turquoise-bearing ore from the existing open pit using 30-pound and 90-pound jack-hammers or a small bulldozer. No blasting of pit material is anticipated. Ore and waste rock will be removed from the pit floor with a backhoe. The majority of the ore will be removed from the south side of the pit and the existing north and west pit highwalls will be benched to create a stable working surface. Over the life of the operation, expansion of the existing pit footprint will not be required. The mine will be operated seasonally, at a rate of less than 10,000 tons of turquoise ore per year.

Waste rock will be placed on the south toe of an existing waste rock storage facility (WRSF) located immediately east and southeast of the open pit. During the proposed Project life of 10 years, the footprint of the WRSF is anticipated to increase from the existing approximately 2.75 acres to approximately 4 acres total.

Make-up water will be obtained from a well located on the Filippini Ranch. A NDEP Profile I analysis of the water reports a slight exceedance of the Profile I reference value for aluminum. Meteoric Water Mobility Procedure (MWMP)-Profile II analytical results for an 'ore' sample report slight exceedances of the Profile II reference values for aluminum, arsenic, fluoride, iron, lead, and mercury in the leachate. Data from other mine sites in the Carico Lake Valley and Crescent Valley areas indicate many of these constituents occur naturally in rock and groundwater samples in elevated concentrations. Based on the analytical test results provided, the depth to groundwater in the area (see below), and the lack of chemical reagents in the ore washing process, the ore and waste are not likely to pose a potential to degrade waters of the state.

Ore will be fed with the backhoe to a portable trommel located on the east side of the WRSF. 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 the HDPE single-lined Settling Pond where the suspended solids can settle out.

The proposed Settling Pond will measure approximately 15 feet wide, 10 feet long, and 5 feet deep. Although the underlying soils in the area demonstrate a very low percolation rate (less than 7×10^{-5} centimeters per second), the pond will be lined with a single layer of 80-mil HDPE geosynthetic liner to prevent the loss of water and accommodate recirculation of the water.

From the Settling Pond, the clarified process water will decant to the Recirculation Pond. The proposed Recirculation Pond will measure approximately 15 feet wide, 10 feet long, and 5 feet deep. Like the Settling Pond, the Recirculation Pond will be lined with a single layer of 80-mil HDPE geosynthetic liner to minimize fluid loss and accommodate recirculation. Water is pumped from the Recirculation Pond with a 100 gallon per minute pump into the 5,000-gallon water truck tank for reuse as make-up water in 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.

Operations will generally cease during winter due to lack of access. During any temporary closure period, water in the ponds will be evaporated 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.

Stormwater diversion berms will be constructed as necessary 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 ½ mile downgradient of the Project area. The nearest surface water expression is at Placer Gulch Spring, approximately 2,500 feet northwest of the facility, and at an unnamed spring, approximately 1,500 feet southwest of the facility. Both springs are upgradient of the facility.

The closest downgradient groundwater well is located approximately 3 miles to the southeast, on the Filippini Ranch, in Section 5, Township 25 North, Range 45 East. Nevada State Engineer records indicate the well was completed in March 1953, to a depth of 205 feet with a perforated casing between 153 feet and 192 feet. First water was encountered during drilling at a depth 121 feet. This well is the source of make-up water for the facility and is transported in a 5,000 gallon water truck. A NDEP Profile I analysis of the well water for the Permit application reports a slight exceedance of the Profile I reference value for aluminum, but no other Profile I exceedances.

The next closest wells are located approximately 7.5 miles west, in Section 31, Township 26 North, Range 43 East, and approximately 9 miles southeast, in Section 35, Township 25 North, Range 45 East. Static water levels in the wells have been measured at 150 and 315 feet below ground surface (bgs), respectively.

No groundwater wells or groundwater information is available for the immediate facility area. However, based on the available information, groundwater in the facility area is estimated to occur at a depth in excess of 100 feet bgs.

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. The primary method for identification of escaping process solution will be placed on required routine monitoring identified in the 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: Phil Migliore

Date: 1 December 2015

Revision 00: 2015 Renewal, effective Day Month 2015