## FACT SHEET

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

Permittee Name:Point Mining and Milling Consolidated, Inc.Project Name:Poverty Gulch MillsitePermit Number:<br/>Review Type/Year/Revision:NEV2005109<br/>New Permit/Renewal 2015, Fact Sheet Revision 00

#### A. <u>Location and General Description</u>

Location: The facility is located in Esmeralda County, in Sections 3 and 10 of Township 7 South (T7S), Range 41<sup>1</sup>/<sub>2</sub> East (R41<sup>1</sup>/<sub>2</sub>E), Mount Diablo Baseline and Meridian (MDB&M), approximately 65 miles south of the town of Tonopah, on the eastern outskirts of the historic town of Gold Point.

General Description: The Project consists of a beneficiation facility, designed to chemically process off-site ore, with a maximum permitted processing rate of 18,249 tons of ore per year. The Project is located exclusively on land administered by the U.S. Bureau of Land Management, Battle Mountain District, Tonopah Field Office. The facility is comprised of an ore stockpile, crusher, chlorination circuit, thickener tanks, drying pads, overflow pond, and conveyance piping. Facilities are required to be designed, constructed, operated and closed without any discharge or release in excess of those standards established in regulation except for meteorological events which exceed the design storm event.

#### B. Synopsis

#### Offsite Ore

Ore will be obtained from local mines which are now abandoned or otherwise no longer in operation. A Water Pollution Control Permit (WPCP) must be obtained prior to mining at any site.

To date three (3) potential mining sites have been characterized for possible incorporation into the Poverty Gulch Millsite WPCP, the sites are:

- 1. Lida Patents in Section 5, T6S, R41E;
- 2. Packrat in Section 14, T7S, R41<sup>1</sup>/<sub>2</sub>E; and
- 3. Mount Jackson in Section 28, T5S, R42E, MDB&M

For each of the three (3) sites characterized above a valid WPCP or incorporation into WPCP NEV2005109 is required prior to any mining activity.

Representative samples of ore from each site have been characterized using the Meteoric Water Mobility Procedure (MWMP) followed by Profile I analysis. The

results show Profile I reference value exceedances in the leachate for pH (8.61 standard unit (SU) for Mount Jackson), and arsenic (0.48 milligram per liter [mg/L] for Mount Jackson, 0.87 mg/L for Lida Patents). All samples were shown by the Acid Neutralizing Potential/Acid Generating Potential (ANP/AGP) analyses to be strongly acid neutralizing. Three types of ore material will be processed including altered limestone, iron manganese, and siliceous ore.

Each batch of ore brought on site will be characterized upon receipt using MWMP-Profile I and acid/base accounting using the ANP/AGP approach. Ore will then be stored prior to crushing on a 60-mil high density polyethylene (HDPE)-lined stockpile pad which includes a 24 inch thick gravel overliner. Meteoric water that falls within the stockpile footprint is collected at a sump where it can be pumped out and used in the process circuit.

## **Processing**

The first step of processing is the crushing of the ore to a fine consistency of 60 mesh or less, after which it is moved to a surge pile on the same containment as the raw ore stockpile. A stacker-conveyor carries the crushed ore to the steel agitation tank where chlorination takes place using a solution of sodium hypochlorite, with a weak infusion of sulfuric acid, which neutralizes the carbonate ores. The resulting pulp is then pumped into a steel thickener tank where the chlorinated solution is neutralized completely by application of ammonia. The slurry is then moved to a lined drying pad for drying and the liquids drained off for re-use in the process tanks. The dried product is stored on the drying pad for sale. Prior to sale the material will undergo characterization including MWMP Profile II analysis to determine if there are no contaminants of concern in the material. No separate waste stream is required as all solids from the process are sent to the drying pads and all fluids are recycled into the process.

The process solution is contained in a closed loop and reused to the fullest extent possible, maintaining all chemicals in double containment. Make-up water from Lida Canyon Hydraulics is provided via pipeline to the site. Process tanks are elevated to provide immediate visual evidence of leaks, and are underlain by 60-mil HDPE liner graded to drain into an HDPE conveyance pipe leading to the overflow pond. The pond is single-lined with 60-mil HDPE and has a volumetric capacity of approximately 66,000 gallons. This is greater than 110% of the combined fluid capacity of all tanks in the chlorination circuit (37,000 gallons). Any accumulation of fluids in the overflow pond will be pumped back into process primary containment within 20 days. Fencing will also be provided to prevent entry of wildlife into the pond area.

Pipelines connecting the process tanks to the drying pads are HDPE pipe laid in a 2 feet deep, 60-mil HDPE lined channel. The drying pads themselves are lined with 60-mil HDPE over a compacted soil layer with maximum permeability of  $1 \times 10^{-5}$  centimeters/second (cm/s). Each pad includes a leak detection port

consisting of filter pipe running from just below the primary liner and daylighting on the side of the berm where it can be easily inspected for presence of flow. The port is located such that any drainage runs directly into the conveyance piping secondary containment trench.

Protection from flooding is provided by stormwater diversion ditches around the west, south and east sides of the facility (surface gradient in the area is approximately south to north). The ditch is a minimum of two (2) feet deep and four (4) feet wide at the top with 2 horizontal:1 vertical sloped compacted fill sides. The size and slope of the ditches provide sufficient capacity to divert all flows from the 100-year, 24-hour storm event. The ore stockpile pad and drying pads have sufficient volume to contain accumulations resulting from the 100-year, 24-hour storm event.

Process chemicals and fuels are stored on two separate 60-mil HDPE lined, covered containment pads. The various liquids are stored in drums or totes (maximum container size 200 gallons) and segregated to prevent mixing of dangerous combinations of chemicals in the event of an accidental spill. Volumetric capacity of the containment is approximately 1,700 gallons.

## C. <u>Receiving Water Characteristics</u>

#### <u>Groundwater</u>

Groundwater below the facility is at a depth exceeding 1,100 feet below ground surface. This is evidenced by several historic deep shaft mines in the area which show no sign of seepage or accumulation of water down to this depth and beyond. There are no known water wells within a 5-mile radius of the facility.

## Surface Water

Surface water within a 1-mile radius of the facility is limited to ephemeral drainages which run only during storm events. Stormwater drainage is from south to north with an upgradient watershed of approximately nine (9) square miles. The majority of this watershed drains to a natural drainage wash between the mill site and the town of Gold Point. The remaining runoff flowing through the facility is redirected to either side of the site by the stormwater diversion ditch.

#### <u>Geology</u>

The facility is located within the Gold Point District which is situated in the middle of the arcuate Slate Ridge in the Precambrian Wyman Formation and Reed Dolomite. Here the Wyman Formation consists of silt and claystone interbedded with limestone, which are metamorphosed in varying degrees to shales, phyllites, calc-silicates, and marble. Overlying the Wyman is the Reed Dolomite, a grey, coarsely crystalline dolomite. Intruding the Precambrian metasediments is a northeast trending finger of the Jurassic Sylvania pluton. It is likely that the north dip of the beds is the result of tilting from the emplacement of the pluton. Both

the metasediments and the pluton are faulted and sheared along north 50-70 degrees west trending, high angle, parallel fault zones which are possibly related to the Silver Peak-Palmetto-Montezuma Oroflex structure. Paralleling the shear zone are fine-grained diorite dikes and ore bearing quartz veins. The quartz veins are brecciated and cemented with hematite and chalcedonic silica. The brecciation of the veins, due to post-emplacement movement, rendered the original sulfides susceptible to oxidizing solutions.

# D. <u>Procedures for Public Comment</u>

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 **Tonopah Times-Bonanza & Goldfield News** 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. <u>Proposed Determination</u>

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

# F. <u>Proposed Limitations, Schedule of Compliance, Monitoring, Special</u> <u>Conditions</u>

See Section I of the Permit.

# G. <u>Rationale for Permit Requirements</u>

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 of leak detection systems. 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 Date: 26 August 2015 Revision 00: Renewal 2015