

FACT SHEET

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

Permittee Name: **Nevada Gold Mines LLC**

Project Name: **Pine Valley Infiltration Project**

Permit Number: **NEV2018109**

Review Type/Year/Revision: **Renewal 2024, Fact Sheet Revision 00**

A. Location and General Description

The facility is located in Eureka and Lander Counties, within Sections 20, 29, 32, 33, 34, 35, and 36, Township 26 North (T26N), Range 48 East (R48E); Section 1, T25N, R48½E; and Section 6, T25N, R49E, Mount Diablo Baseline and Meridian, approximately 43 miles southeast of the town of Battle Mountain, Nevada. The facility is located on both private land controlled by the Permittee and public land administered by the U.S. Bureau of Land Management (BLM), Mount Lewis Field Office in Battle Mountain, Nevada. The site may be accessed by traveling approximately 40 miles west from Elko, or 30 miles east from Battle Mountain, on Interstate Highway 80, then 31 miles south on Nevada State Route 306, then 9 miles southeast on Lander County Road 222.

General Description: The Pine Valley Infiltration Project consists of infiltration of mine dewatering water at a maximum rate of 2,300 gallons per minute (gpm; equivalent to 3,312,000 gallons per day (gpd)) via rapid infiltration basins (RIBs) located in Pine Valley. The Pine Valley infiltration site will contain four RIBs. The facility must be designed, constructed, operated, and closed without any discharge or release in excess of those standards established in regulation, except as authorized in the Permit and for meteorological events which exceed the 24-hour, 25-year design storm event.

B. Synopsis

General: Barrick Cortez Inc. a subsidiary of Barrick Gold Corporation was the original Permittee and Operator of the Project at the time of the initial Permit issuance in August 2018. In July 2019, Barrick Gold Corporation and Newmont Mining Corporation entered into a joint venture transferring the Permit to Nevada Gold Mines LLC, the current Permittee.

The Permittee mines gold ore from the Pipeline Project (Water Pollution Control Permit (WPCP) NEV0093109) and Cortez Hills Project (WPCP NEV2007106) by open pit extraction methods, and conducts underground mining at Cortez Hills and Goldrush Underground Mine (WPCP NEV2016104), all from elevations below the pre-mining groundwater table in the southern portion of Crescent Valley. Therefore, the operations requires a dewatering program to extract groundwater from within the excavations and from the periphery of the open pit and underground workings in advance of mining. Dewatering water from the Cortez mining operation is infiltrated under this Permit, the Pipeline Infiltration Project (WPCP

NEV0095111), and Grass Valley Infiltration Project (WPCP NEV2018107). The Pine Valley facility consists of four RIBs, a booster pump station, surface pipelines, and associated infrastructure and apparatuses.

The facility is located in the northern portion of Grass Valley and the southwestern portion of Pine Valley, on the southeast flank of the Cortez Mountains, between the elevations of 5,710 feet above mean sea level (amsl) and 6,440 feet amsl. The facility provides for return of the Cortez Hills Mine dewatering water to Pine Valley in order to compensate inter-basin transfers of groundwater out of the Pine Valley basin.

Infiltration System Design: The Project begins at the flow control valve at the Grass Valley Infiltration RIBs (NEV2018107). The dewatering pipeline extends southward in Grass Valley and is connected to the Grass Valley Booster Pump Station before continuing east and terminating at the Pine Valley RIBs approximately 7 miles southeast of the Grass Valley infiltration RIBs. The project is designed to infiltrate up to 1,075 gpm, and the dewatering delivery pipeline system is designed to convey an additional 3,225 gpm for a total of 4,300 gpm. The additional 3,225 gpm capacity is for potential future infiltration sites at the Project. During the operating of the Project from November 2020, the RIBs infiltrated much better than expected. In January 2022, the Permittee requested and the Division approved to increase the infiltration rate to 2,300 gpm.

The dewatering pipeline from the Grass Valley RIBs to the Project is approximately 39,100 feet in length. The conveyance pipeline from the Grass Valley RIBs to the Project consists of the following: approximately 11,400 feet of 24-inch diameter high density polyethylene (HDPE) pipe (standard dimension ratio (SDR) 17), the Grass Valley Pump Station, approximately 5,860 feet of 24-inch diameter HDPE (SDR 7), 4,000 feet of 24-inch diameter HDPE (SRD 9), 1,500 feet of 24-inch diameter HDPE (SDR 13.5), 4,150 feet of 24-inch diameter HDPE (SDR 17), 4,580 feet of 18-inch diameter HDPE (SDR 11), 7,500 feet of 18-inch diameter HDPE (SDR 9), a stilling basin, and to the Pine Valley RIBs. At major road crossings, the 18-inch pipe was inserted into a pipe sleeve and have a minimum of 2-feet for light vehicle crossing and a minimum of 5-feet for haul road crossings.

Grass Valley Pump Station: The Grass Valley Pump Station is located approximately 1.7 miles south of the Grass Valley RIBs. The station consists of four vertical turbine pumps. The pumps are mounted above a concrete sump.

RIB Construction and Water Management: The RIBs were constructed on an alluvial fan. Each, of the four, Pine Valley RIBs are 200 feet wide and 1,000 feet long at the crest. Basins are designed to be 20 feet deep with side slopes of 3 horizontal to 1 vertical. An infiltration enhancement trench was constructed within the floor of each basin. These trenches are designed to be approximately 16 feet deep and four feet wide and will be filled with pit-run aggregate material. The aggregate material shall be sized with 50 percent passing 1 inch and without fines passing a number 200 mesh screen.

Within the infiltration site, the dewatering water is distributed to each RIB through dedicated 12-inch diameter HDPE RIB inlet pipes equipped with butterfly valves, which are used to manage flow amongst two or more RIBs. The RIB inlet pipe runs down the RIB sideslope to the bottom of the basin, typically near one end of the RIB. The inlet pipeline terminates into a 10-foot square by 3-foot thick layer of riprap having a mass median diameter (D_{50}) of 9 inches. There are no totalizers or flow meters at individual RIBs as the flow is totalized at the Grass Valley Pump Station.

The RIBs are constructed in pairs, one upgradient and one downgradient, typically 100 to 200 feet apart. The upgradient RIB has a 5-foot diameter basin overflow manhole located within the lower sideslope of the RIB. The manhole is constructed of precast concrete rings to a height of 7 feet above a concrete base set into the floor of the RIB. If water in the RIB reaches the top of the manhole, it will overflow through a trash screen and flow by gravity through a 16-inch diameter HDPE overflow pipe that discharges into the downgradient RIB. Each downgradient RIB, therefore, includes two inlet pipes: the overflow pipeline for the upgradient RIB, and the normal RIB inlet distribution pipe. Both inlets are constructed to the same design as the RIB inlet pipe termination structure described above. The spillway connects to a surface riprap apron downgradient of the RIB. The spillway is a minimum of 10 feet wide and 2 feet deep, with a 12-inch thick layer of riprap over a base layer of geotextile. The Permit prohibits surface discharges from RIBs; spillways are constructed for emergency use only.

Petroleum-Contaminated Soil Management: No PCS storage or disposal is approved for the facility. The Permittee is required to remove all PCS from the facility for provisional storage and disposal at the approved Pipeline Project waste rock dump (WPCP NEV0093109) in accordance with the approved PCS Management Plan and the Division Guidance for Mine-Site PCS Management Plans.

C. Receiving Water Characteristics

In the Project area, groundwater is localized in structural bedrock aquifers with no substantial water-bearing zones in the alluvium. Groundwater flow is controlled by the numerous north-south and east-west trending faults and fractures. Local bedrock has generally low hydraulic conductivity.

Groundwater depths range from 100 feet below ground surface (bgs) to 300 feet bgs. Receiving waters are located in the southwestern portion of Pine Valley (State of Nevada Hydrographic Basin #53). Pine Valley is semi-closed topographically. The southern Cortez Mountains and northernmost section of the Simpson Park Range separates the western portion of Pine Valley from Grass Valley (State Hydrographic Basin #138). The Cortez Mountain Range separates Crescent Valley (State Hydrographic Basin #54) from Pine Valley.

Through hydraulic studies the Permittee determined that dewatering activities for the Cortez Complex in Crescent Valley is drawing small amounts of water from

Pine Valley and Grass Valley. Baseline characteristics of several analyses periodically exceed Division Profile I reference values (drinking water standards) in the one location for antimony, arsenic, iron, manganese, and pH. Baseline information will be provided with three additional monitoring wells downgradient of the RIBs.

There are no seeps and springs within a mile radius of the project. Pine Creek is located approximately 0.6 miles from the Project and is intermittent.

In October 2019, the Division approved the Pine Valley Groundwater Analysis report which demonstrated the alluvial attenuation capacity below the Pine Valley Infiltration basins. The report demonstrated, at concentrations of 0.045 mg/L arsenic and 0.0063 mg/L antimony, the infiltration project can operate for 215 years till the alluvial attenuation capacity will be reached for arsenic and 1,009 years for antimony. The Division found a calculation error and antimony will be attenuated for longer than 18,000 years in the original study. The alluvial attenuation capacity was calculated from the modeled moundwater elevation for the proposed rapid infiltration basins and confined to the 10-foot contour increase from the existing groundwater elevation. The proposed operation life as of 2019 is 13 years well below the capacity demonstrated by the report.

In January 2022, the Division approved a request to increase the infiltration rate from 1,075 gpm to 2,300 gpm. A re-evaluation of the alluvial attenuation capacity was provided with the request. The report demonstrated, at concentrations of 0.045 mg/L arsenic and 0.0063 mg/L antimony, the project can operate for 133 years for arsenic and greater than 10,000 years for antimony.

With the 2024 Renewal, the Division approves the request to infiltrate water from the Goldrush Infiltration Project (NEV2022103). The Goldrush Infiltration Project is located north of the existing Pine Valley Infiltration Project and also draws water from Pine Valley.

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 published on the Division website: <https://ndep.nv.gov/posts/category/land>. 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 the public notice is posted to the Division website. 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 or 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 renewed Permit.

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

See Section I of the Permit.

G. Rationale for Permit Requirements

The facility must not discharge a pollutant that would result in the degradation of existing or potential underground sources of drinking water, or that would cause an exceedance of an applicable surface water quality standard or regulation.

The primary methods for ensuring compliance will be required routine monitoring and reporting, augmented by Division site inspections. Specific monitoring requirements can be found 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 (the 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.

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Date: 18 January 2024

Revision 00: Permit Renewal