

FACT SHEET

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

Permittee Name: **Daniel J. Myers**

Project Name: **Dusty Mine Project**

Permit Number: **NEV2012109**

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

A. Location and General Description

Location: The facility is located in Pershing County, Sections 20 and 30, Township 32 North, Range 32 East, Mount Diablo Baseline and Meridian (MDB&M), approximately 30 miles north northeast of the town of Lovelock, Nevada. All affected land is managed by the U.S. Bureau of Land Management (BLM) Humboldt River Field Office. The facility is on the eastern flank of the Majuba Mountains and on the west side of Rye Patch Reservoir, approximately 13 miles northwest of Rye Patch Dam. To access the site, take exit 129 (Rye Patch Dam) from Interstate 80 and proceed west. Take the first left turn after crossing the dam, then a right turn at the tee. Follow this main dirt road north for approximately 8 miles and then take a diagonal left turn. Follow this road for approximately 4.5 miles to the site.

General Description: The Dusty Mine Project is permitted as a physical separation facility, in accordance with NAC 445A.414, to extract gold from alluvium derived from the Project site. Operations are seasonal, typically from April through November, and a maximum of 20,000 tons of ore will be processed per year. Initially, the ore will be obtained from historic tailings piles or ore stockpiles. As of December 2017, the historic piles have not been depleted. After the historic stockpiles are exhausted, additional alluvial ore may be mined from the Project area, provided that applicable reclamation permits and authorizations are obtained first from the BLM and the Division. Water is obtained from an existing water supply well located upgradient of the Tailings Pond. The process circuit may include grizzly, a feed hopper, a trommel, a vibrating screen plant, sluice boxes, and various other small components to physically separate gold particles from the ore. Two interconnected earthen ponds, the Tailings Pond (also known as the 1st Pond) and the Recirculation Pond (also known as the 2nd Pond), are used to collect tailings and to clarify the process water for reuse in the circuit. Each year by June 30th, tailings must be returned to the mine pits, except a minimum amount may be placed on the pond embankments as needed to maintain stability and to provide sufficient pond capacity, and a layer of bentonite must be added to each pond to reduce infiltration. No chemicals or ore crushing are authorized in the process. The total Project disturbance area must be less than five acres; otherwise, the Permittee must cease operation until a separate reclamation permit is obtained from the Division and an approved reclamation bond is posted.

B. Synopsis

Background: U.S. Geological Survey Bulletin 1356, *Placer Gold Deposits of Nevada (1973)*, states that the Majuba placer gold district (also known as the Antelope or Rye Patch district) was reportedly discovered in 1938 by Charles E. Dice, and was intensively worked from 1938 to 1941, with over 100 ounces of gold per year being produced during that period. The district is known for well-formed crystalline gold nuggets that occur in shallow alluvium. Historically, the U.S. Bureau of Mines located placer claims in Sections 8, 20, and 30, Township 32 North, Range 32 East, MDB&M, in the general vicinity of the current Dusty Mine Project. According to the Permittee, water for some of the early activity in the district was piped from a spring uphill from the Dusty Mine Project, and air bellows were used in the separation process. The ore stockpiles that the Permittee plans to process were reportedly mined originally by the Permittee's grandfather. It is unknown whether chemicals were previously used to process ore in the Project area.

Mining: The Permittee does not plan to mine ore initially, but rather plans to process approximately 35,000 tons of previously mined ore from historic stockpiles and tailings piles. After that, the Permittee may mine alluvial ore, provided that appropriate authorization is obtained from the BLM and from the Reclamation Branch of the Division's Bureau of Mining Regulation and Reclamation, as applicable. The Permit prohibits the processing of non-alluvial (hard-rock) ore or the use of an ore crusher at this time, because blasted or crushed material has not been characterized and may (or may not) necessitate a greater degree of process containment beyond what is provided at the current facility.

Processing: Water is piped from the water supply well via a 2-inch diameter galvanized steel pipe to a water meter, and then via a 4-inch fire hose to the Tailings Pond. Two pumps at the Recirculation Pond convey clarified process water back to the process circuit via two 4-inch diameter rubber hoses that both join to a 6-inch diameter hose.

A grizzly and trommel, and/or a feed hopper and a vibrating screen plant, are used to remove coarse tailings material larger than ½-inch diameter. Multiple vibrating screen decks may be used, with the bottom screen being ½-inch mesh. Sluices and various other small physical separation components are then used to separate gold particles from the minus ½-inch fraction. The minus ½-inch tailings material is washed into the Tailings Pond, or otherwise piled up and returned annually to the pits or trenches from which the ore was obtained.

The earthen Tailings Pond measures approximately 55 feet by 55 feet, with an approximate maximum depth of 10 feet near the highest part of the dam. The Tailings Pond is hydraulically connected to the Recirculation Pond via one or more 4-inch diameter polyvinyl chloride (PVC) pipes that penetrate the Tailings Pond dam approximately 3 feet up from the pond bottom and allow gravity flow into the

Recirculation Pond. The earthen Recirculation Pond measures approximately 45 feet by 75 feet, with an approximate maximum depth of 10 feet.

The Permit requires that all tailings be removed from the processing area and ponds and be returned for reclamation to the mine pits or trenches from which the ore was obtained by the following June 30th after each batch of tailings is generated. The exception to this requirement is that a minimum amount of tailings material may be placed on the pond embankments as necessary to maintain stability and to provide sufficient pond capacity. A small amount of tailings may also be placed in the process area if needed to provide drainage. However, once these needs are met, all additional tailings, even in the first year of operation, shall be returned to the mine pits for reclamation.

Also, by June 30th of each year of operation, after the tailings are removed from the ponds, a new layer of bentonite is placed on the bottom and sides of each pond sufficient to minimize water loss and consequent infiltration. No design, quality assurance/quality control, or permeability test results have been submitted to the Division regarding the bentonite layer; therefore, it does not qualify as a liner pursuant to NAC 445A.438. However, the bentonite layer serves the dual purpose of conserving water for the process circuit and reducing the potential for degradation of groundwater.

A meteoric water mobility procedure (MWMP) / Profile I analysis performed on a sample of the alluvial ore collected 21 January 2013 indicates four Profile I constituents at concentrations in excess of Profile I reference values: aluminum (1.4 milligram per liter(mg/L)), arsenic (0.024 mg/L), iron (0.72 mg/L), and total dissolved solids (TDS) (3,300 mg/L). Based on this analysis, the analysis from the water supply well, and the uncrushed, alluvial nature of the ore, it was determined that the bentonite amended ponds do not require a liner. However, the Permit requires water quality monitoring of the water supply well and the process solution, and if such monitoring indicates a potential for degradation of waters of the State, this determination may be reconsidered.

C. Receiving Water Characteristics

Two water wells are present at the facility. Both are located upgradient or cross gradient from the processing circuit and ponds. Only the well located upgradient (west) of the Tailings Pond in the southeast quarter of the northwest quarter of Section 30, Township 32 North, Range 32 East, MDBM, will be used as a water supply well for the Project. This well, permitted with the Nevada Division of Water Resources (NDWR) under certificate 42141, is 672 feet deep and had a static water level of approximately 48 feet below the ground surface (ft bgs) in January 2013. A Profile I analysis performed on a water sample collected from the well on 21 January 2013 indicates generally good water quality that meets all Profile I

reference values except for low-level exceedances for iron (1.0 mg/L) and manganese (0.14 mg/L).

The other water well is located in the northeast quarter of the southwest quarter of Section 30, Township 32 North, Range 32 East, MDBM. It is permitted with NDWR under certificate 45554, and is 400 feet deep. The current static water depth and water quality in this well are unknown, but the static water depth was 30 ft bgs when the well was reamed and cased in 1986.

The Permittee reports no known surface water bodies within ½ mile of the Project. Cavanaugh Spring is located approximately 1½ mile northwest and upslope of the Project. Cavanaugh Wash is a shallow ephemeral drainage that runs through the Project area from Cavanaugh Spring. Cavanaugh Wash empties into Rye Patch Reservoir approximately 4 miles east of the Project. The Permit prohibits the discharge of process water to surface drainages and requires the construction of a diversion ditch to prevent upgradient stormwater from flowing onto the Project area.

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 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 renewed 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 methods for identification of escaping process solution will be required visual monitoring for leakage through pond embankments and routine monitoring of process solution water quality. 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 2800 Cottage Way, Room W-2606, Sacramento, California 95825, (916) 414-6464, for additional information.

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