NEVADA DIVISION OF
ENVIRONMENTAL
PROTECTION

A division of the
Nevada Department of Conservation & Natural Resources

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FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: GREFCO MINERALS, INC.

36994 SUMMIT LAKE ROAD
BURNEY, CA 96013

Permit Number: NS2018507

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: GREFCO MINE & MILL, ESMERALDA
GREFCO MINE RD, HWY 6 WEST, BASALT, NV 89010
LATITUDE: 37.995306, LONGITUDE: -118.213147
TOWNSHIP: 2N, RANGE: 34E, SECTION: 29

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	INTAKE WATER	Intake Structure	00	37.995627	-118.212474	N/A
002	END OF THE PIPE FROM MILL	External Outfall		37.99432170	-118.212344	N/A
003	PIT LAKE	Surface Disposal Site	5938	37.99223440	-118.214769	PIT LAKE/WATERS OF THE STATE

Permit History/Description of Proposed Action

The Permittee, Grefco Minerals, Inc. (Grefco), has applied for the renewal of groundwater discharge permit NS2018507 for the Grefco Mine and Mill located at Grefco Mine Road, Highway 6 West near Basalt, Nevada. The overall facility extends over both Esmeralda and Mineral counties; however, the discharge covered in this permit is located within Esmeralda county. The facility proposes to continue discharging process water into the floor of the inactive Mill pit located south of the processing plant, forming a Pit Lake (Outfall 003). The same daily maximum flow rate of 50,000 gallons per day (gpd) and pH range of 6.4 to 8.6 standard units (S.U.) limitations are applied to the mill discharge (Outfall 002).

The permit was first issued on January 4, 2019, and expired on January 3, 2024; the permit has been administratively continued since.

Facility Overview

Grefco is a diatomite mine with an on-site mill that processes mined material. The facility is located in both Esmeralda and Mineral Counties, approximately 60 miles west of Tonopah and south of Nevada State Highway 6. The diatomaceous earth (DE) is mined and processed on site. The mill is currently processing previously mined stockpiled material. This process involves dehydrating the crushed DE using spent

restaurant oil as fuel. Historical investigations have conclusively demonstrated that groundwater is absent in the basin where the mill is located; therefore, the mill's intake water (Outfall 001) is sourced from the neighboring groundwater basin.

Since 2010, the mill has discharged approximately 20 gallons per minute (gpm) of water to convey coarse mill rejects into an inactive mill pit located south of the processing plant, forming a Pit Lake (Outfall 003). An initial compliance visit by the Bureau of Water Pollution Control (BWPC) in April 2017 determined that the facility required coverage under an Onsite Sewer Disposal System (OSDS) permit and an individual permit to cover Pit Lake discharges. A discharge sample from this visit identified several constituents elevated above Profile 1 reference values (Drinking Water Standards adopted as reference values in the general context of protecting all groundwaters of the State). As part of the new permit application, BWPC required the Permittee to conduct a Pit Lake study to assess the potential groundwater impacts associated with Outfall 003.

The Pit Lake study estimated that the travel time to the nearest groundwater (approximately 4.3 miles from Outfall 003) would be at least 21,943 years under current discharge conditions. The confirmed absence of groundwater within this basin significantly reduces the potential for groundwater contamination. Wildlife use of the Pit Lake is minimal. Small rodents and limited avian species may be present; however, wildlife preferentially uses a larger, more accessible storage reservoir located one-third mile north of the Pit Lake. Due to the nature of this facility and discharge location, BWPC applied Profile 3 parameters for samples analysis. Profile 3 parameters and reference concentration were developed and are typically adopted by the Bureau of Mining Regulation and Reclamation (BMRR). Vanadium (reference concentration: 0.1 mg/L) was the only constituent detected above its reference level. No apparent point source of Vanadium has been identified. A reasonable potential analysis evaluating acute impacts to wildlife, based on literature review, concluded that the reported concentration of 0.66 mg/L is not expected to cause acute impacts to wildlife that may come in contact with Outfall 003.

The site’s Operation and Maintenance (O&M) Manual was last reviewed and approved by the Division on March 21, 2019. The Technical, Compliance, and Enforcement (TCE) of BWPC requires O&M Manual to be updated every ten (10) years.

Outfall Summary

Outfall 001 – This intake structure is the intake water utilized by the mill for various cooling and washing steps in the DE process circuit.

Outfall 002 – This external outfall is where all process water from the mill come out from before going into a small culvert of the surface discharge channel.

Outfall 003 – This surface disposal site is a pit lake formed by continual disposal of process water from the mill into the inactive Mill pit.

Effluent Characterization

Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from 2019 to 2025, was reviewed as part of his permit renewal process. The process water was utilized for various cooling and washing steps in the process circuit. No chemical additives or water treatment processes were employed prior to discharge. The average total annual flow out of the mill during this period was 13.24 million gallons per year (Mgal/yr), and the daily maximum discharge flow rate for Outfall 002 is limited to 50,000 gpd. No exceedance was reported on this limit. The pH limit applied for both Outfall 002 and Outfall 003 is between 6.4 - 8.6 Standard Units (S.U.), and averages from the reviewed period are 7.96 S.U. and 8.63 S.U. respectively. Furthermore, the average measured surface elevation of Outfall 003 is 5,824 feet above mean sea level (ft AMSL)

No limitations were given to all constituents for Outfall 001, as well as Profile 3 constituents listed for Outfall 002 and Outfall 003 (monitoring and reporting only).

Pollutants of Concern
Pollutants of concern are any pollutants or parameters that are believed to be present in the discharge and could affect or alter the physical, chemical, or biological condition of the receiving water. No groundwater is detected in this basin, thus the receiving water is the Pit Lake resulting from the discharge with naturally low permeability. pH is the only pollutant of concern for the process water.

Receiving Water
Receiving water is the formed Pit Lake and is regulated as Waters of the State of Nevada. No groundwater has been detected in this basin and fluctuations of the Pit Lake surface level are due to mill discharge, intentional pumping for dust control (covered by BMRR permit), precipitation, and evaporation.

Compliance History
The Permittee reported a single pH exceedance at Outfall 002, while pH levels at Outfall 003 have consistently exceeded the maximum allowable limit throughout the permitted period. Otherwise, the facility was in compliance and submitted timely reports during the 2019 to 2025 reporting period.

Proposed Effluent Limitations
The discharge shall be limited and monitored by the Permittee as specified below:

NS OTHER - Discharge Limitations Table for Sample Location 001 (Intake Water) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Intake	001	Annual	GRAB
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Intake	001	Annual	GRAB
Alkalinity, bicarbonate (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Alkalinity, total (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Aluminum, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Antimony, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Arsenic, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Barium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Beryllium, total recoverable (as Be)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Boron, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Cadmium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Calcium, total recoverable	Daily Maximum		M&R Milligrams per Liter	Intake	001	Annual	DISCRT

NS OTHER - Discharge Limitations Table for Sample Location 001 (Intake Water) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
			(mg/L)				
Chloride, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Chromium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Copper, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Fluoride, total (as F)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Iron, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Lead, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Lithium, total (as Li)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Magnesium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Manganese, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Mercury, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Molybdenum, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT

NS OTHER - Discharge Limitations Table for Sample Location 001 (Intake Water) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Nickel, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Nitrite plus nitrate total 1 det. (as N)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Phosphorous, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Potassium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Selenium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Sodium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Strontium, total recoverable, ug/L	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Sulfate, total (as SO4)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
			M&R				

NS OTHER - Discharge Limitations Table for Sample Location 001 (Intake Water) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Thallium, total recoverable	Daily Maximum		Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Tin, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Uranium, natural, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Vanadium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT
Zinc, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Intake	001	Annual	DISCRT

Notes (NS OTHER - Discharge Limitations Table):

1. All samples collected for analysis of Profile 3 constituents shall be unfiltered.

NS OTHER - Discharge Limitations Table for Sample Location 002 (End Of The Pipe From Mill - External Outfall) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Flow rate	Daily Maximum	< 50000 Gallons per Day (gal/d)		Effluent Gross	002	Daily	METER
Flow, total	Annual Total	M&R Million Gallons (Mgal)		Effluent Gross	002	Annual	CALCTD
pH, minimum[2]	Daily Minimum		>= 6.4 Standard Units (SU)	Effluent Gross	002	Annual	GRAB
pH, maximum[2]	Daily Maximum		<= 8.6 Standard Units (SU)	Effluent Gross	002	Annual	GRAB
Alkalinity, bicarbonate (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Alkalinity, total (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Aluminum, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Antimony, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Arsenic, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Barium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Beryllium, total recoverable (as Be)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Boron, total recoverable	Daily Maximum		M&R Milligrams per Liter	Effluent Gross	002	Annual	DISCRT

NS OTHER - Discharge Limitations Table for Sample Location 002 (End Of The Pipe From Mill - External Outfall) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
			(mg/L)				
Cadmium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Calcium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Chloride, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Chromium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Copper, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Fluoride, total (as F)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Iron, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Lead, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Lithium, total (as Li)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Magnesium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Manganese, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT

NS OTHER - Discharge Limitations Table for Sample Location 002 (End Of The Pipe From Mill - External Outfall) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Mercury, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Molybdenum, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Nickel, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Nitrite plus nitrate total 1 det. (as N)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Phosphorous, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Potassium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Selenium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Sodium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
			M&R				

NS OTHER - Discharge Limitations Table for Sample Location 002 (End Of The Pipe From Mill - External Outfall) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Strontium, total recoverable, ug/L	Daily Maximum		Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Sulfate, total (as SO4)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Thallium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Tin, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Uranium, natural, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Vanadium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT
Zinc, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Annual	DISCRT

Notes (NS OTHER - Discharge Limitations Table):

1. All samples collected for analysis of Profile 3 constituents shall be unfiltered.
2. Adopted from Profile 3 reference value for minimum pH of 6.5 +/- 0.1 Standard Units (S.U.) and maximum pH of 8.5 +/- 0.1 S.U.

NS OTHER - Discharge Limitations Table for Sample Location 003 (Pit Lake - Surface Disposal Site) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Water level relative to mean sea level	Daily Minimum	M&R Feet (ft)		See Footnote	003	Quarterly	VISUAL
Water level relative to mean sea level	Daily Maximum	M&R Feet (ft)		See Footnote	003	Quarterly	VISUAL
pH, minimum[2]	Daily Minimum		>= 6.4 Standard Units (SU)	See Footnote	003	Quarterly	GRAB
pH, maximum[2]	Daily Maximum		<= 8.6 Standard Units (SU)	See Footnote	003	Quarterly	GRAB
Alkalinity, bicarbonate (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Alkalinity, total (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Aluminum, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Antimony, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Arsenic, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Barium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Beryllium, total recoverable (as Be)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Boron, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Cadmium, total recoverable	Daily Maximum		M&R Milligrams per Liter	See Footnote	003	Annual	DISCRT

NS OTHER - Discharge Limitations Table for Sample Location 003 (Pit Lake - Surface Disposal Site) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
			(mg/L)				
Calcium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Chloride, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Chromium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Copper, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Fluoride, total (as F)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Iron, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Lead, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Lithium, total (as Li)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Magnesium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Manganese, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Mercury, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT

NS OTHER - Discharge Limitations Table for Sample Location 003 (Pit Lake - Surface Disposal Site) To Be Reported Annually[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Molybdenum, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Nickel, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Nitrite plus nitrate total 1 det. (as N)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Phosphorous, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Potassium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Selenium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Sodium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Strontium, total recoverable, ug/L	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
			M&R				

NS OTHER - Discharge Limitations Table for Sample Location 003 (Pit Lake - Surface Disposal Site) To Be Reported Annually[1]

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Sulfate, total (as SO4)	Daily Maximum		Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Thallium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Tin, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Uranium, natural, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Vanadium, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT
Zinc, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote	003	Annual	DISCRT

Notes (NS OTHER - Discharge Limitations Table):

1. This monitoring location is the Pit Lake where the facility discharges to. All Pit Lake water samples collected for analysis of Profile 3 constituents shall be unfiltered and collected at least two feet from the edge of the water.
2. Adopted from Profile 3 reference value for minimum pH of 6.5 +/- 0.1 Standard Units (S.U.) and maximum pH of 8.5 +/- 0.1 S.U.

Summary of Changes From Previous Permit
All outfalls coordinates are updated to reflect locations depicted in the O&M Manual.

Technology Based Effluent Limitations
Technology based effluent limitations (TBELs) are not applicable to this permit.

Water Quality Based Effluent Limitations
Water quality based effluent limitations are not applicable to this permit.

Proposed Water Quality Based Effluent Limits (monthly/weekly/daily)
Water quality based effluent limitations are not applicable to this permit.

Basis for Effluent Limitations
There are currently no specific water quality standards that have been formally adopted by the State for groundwater. However, BWPC has the discretion to implement effluent limitations outside water quality standards per Nevada Administrative Code (NAC) 445A.243, which states, “In establishing an effluent limitation to carry out the policy of this State set forth in Nevada Revised Statutes (NRS) 445A.305, consideration must be given to, but is not limited by the following: ... (2) the need for standards that specify

by chemical, physical, biological or other characteristics the extent to which pollution by various substances will not be tolerated."

Due to the mill discharge that created a pit lake, BWPC adopted the *Pit Lake Water Quality Characterization Program - NDEP Profile III* developed by BMRR. BMRR is required by NAC to ensure that mine pit lake water quality does not '…affect adversely the health of human, terrestrial or avian life' (NAC 445A.429). As such, BMRR has adopted an Ecological Risk Assessment (ERA) methodology to use in evaluating potential pit lake water quality risks. The ERA methodology is a well-known approach in evaluating potential hazards in the environment.

Reviews of all available data, including the most recent Pit Lake study, in conjunction with the Permittee-reported site geology and Pit Lake water balance, formed the basis for the general permit conditions. Additionally, a reasonable potential analysis (RPA) was conducted using publicly available scientific literature and reported Vanadium concentrations in discharge samples. The results of the RPA, together with the fact that the discharge flows through and ultimately settles within a pit primarily comprised of DE (a material commonly used as a filtration medium) support the determination that additional treatment for Vanadium is not required at this time.

pH: pH limits are adopted from Profile 3 reference values to ensure protection of wildlife under reasonable exposure scenarios.

Profile 3 (Monitoring and Reporting Only): The RPA results and general BMRR policies for Pit Lake regulation were used as guidance in establishing Profile 3 monitoring requirements.

Water Level Monitoring: Water surface elevation monitoring is required because this data is a key component of the Pit Lake water balance and will support future evaluations of long-term stability and potential impacts.

Antidegradation
The Division has developed an antidegradation regulation that is applied on a statewide basis, and which meets the statutory requirements of Nevada's water pollution control law found at NRS 445A.520 and NRS 445A.565 and is consistent with the federal antidegradation policy found at Title 40 in the Code of Federal Regulations (CFR) § 131.12. The objective of the Division's antidegradation regulation is to prevent degradation of Nevada's surface waters and maintain the unique attributes and special characteristics and water quality associated with high-quality waters. As this is a reissuance, and no changes to the flow or to the waste stream has been requested, a formal antidegradation review is not required.

Special Conditions
See table below:

SA – Special Approvals / Conditions Table

Item #	Description
1	All samples collected for analysis of Profile 3 constituents shall be unfiltered.
2	The Permittee shall continue to submit all DMRs electronically through the Nevada NetDMR website: https://netdmr.ndep.nv.gov/netdmr/public/home.htm

Discharges From Future Outfalls/ Planned Facility Changes
The Permittee anticipates no discharges from any future outfalls or planned facility changes.

Corrective Action Sites
Historical investigations have conclusively demonstrated that no groundwater exists within the water basin the Grefco mine and mill is situated in. Furthermore, at this time, there are no Bureau of Corrective Actions (BCA) remediation sites within a one-mile radius of the Pit Lake location.

Wellhead Protection Program

The outfalls are not located within a Wellhead Protection Area, which represents an approximate 10-year capture zone of a well, or within a Drinking Water Protection Area, which is defined by a 3,000-foot radius around a public water system (PWS) well.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit for review and approval two copies (one electronic and one hard copy) of an Operation and Maintenance (O&M) Manual. The O&M Manual shall follow the Division's guidance document, *WTS2: Minimum Information Required for an Operation and Maintenance Manual*, and be prepared and wet stamped by a licensed, qualified Nevada engineer (P.E.).	3/20/2029

Deliverable Schedule:

DLV– Deliverable Schedule for Reports, Plans, and Other Submittals

Item #	Description	Interval	First Scheduled Due Date
1	Annual DMRs	Annually	1/28/2027

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwater of the State of Nevada subject to the conditions contained within the permit, is being mailed to interested persons on our mailing list and will be posted on our website at https://ndep.nv.gov/posts. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **5/20/2026,** a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

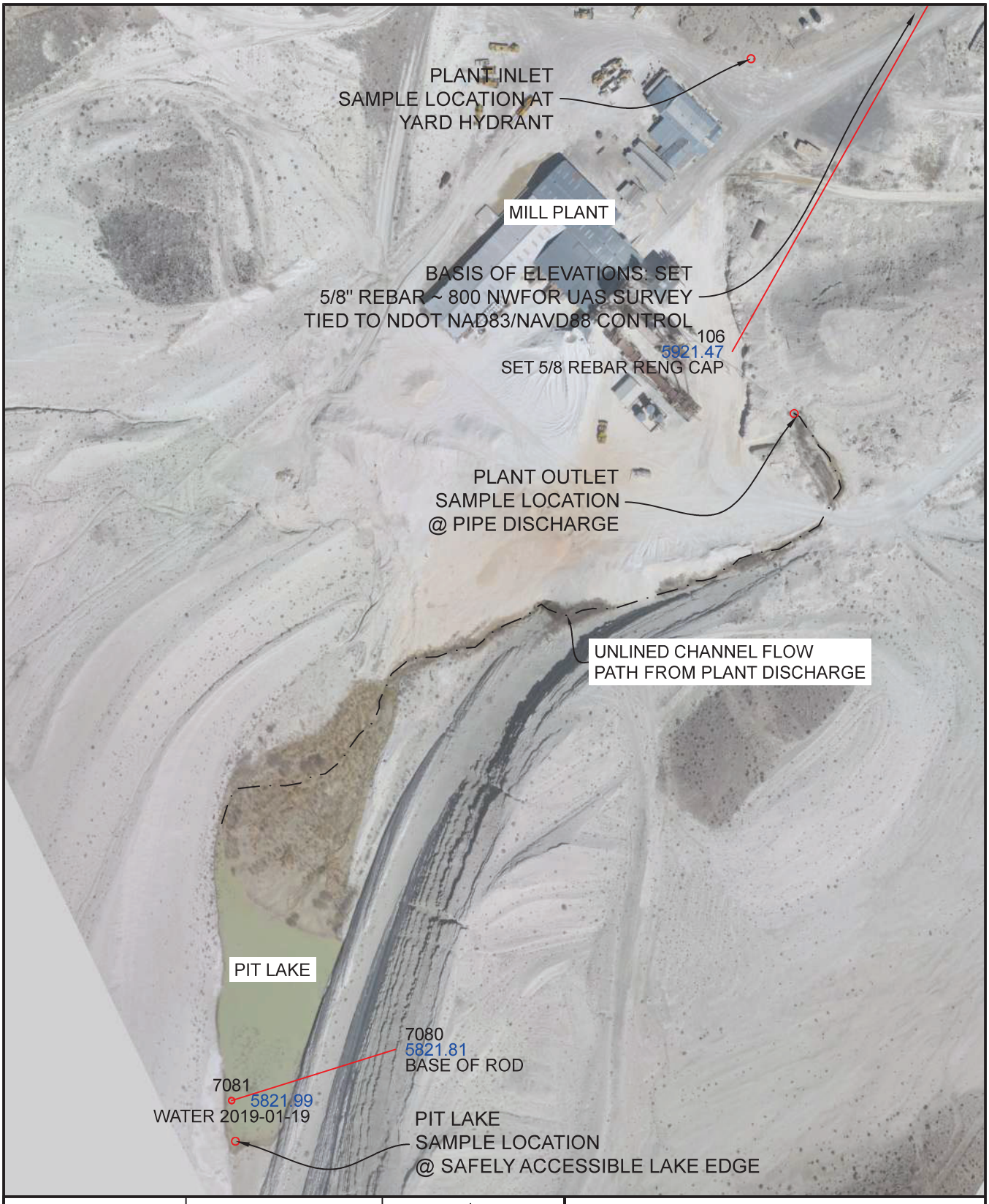
A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate 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 determined to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination:

The Division has made the tentative determination to issue/re-issue the proposed 5-year permit.

Prepared by: **Florida Nasategay**
Date: **4/15/2026**
Title: **Staff I, Associate Engineer**



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DRAWN: NER

DATE: 2019-02-07

PREPARED FOR:

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SCALE IN: FEET

Grefco Basalt Mine
WPCP NS2018507

FIGURE 3
MONITORING PLAN

ESMERELDA COUNTY NEVADA

PROJECT NO. 1-442-06.014