Central Valley Regional Water Quality Control Board

27 October 2023

Kevin Ramsay
Manager, U.S.A. Legacy Assets
Carson Hill Gold Mining Corporation
P.O. Box 1085
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VIA EMAIL
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NOTICE OF APPLICABILITY (NOA); GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-0006 FOR LIMITED THREAT DISCHARGES TO SURFACE WATER; CARSON HILL GOLD MINING CORPORATION, CARSON HILL GOLD MINE, CALAVERAS COUNTY

Our office received a Notice of Intent on 3 January 2023 from Carson Hill Gold Mining Corporation (hereinafter Discharger), for continued coverage of the discharge of treated water from hard rock mines to surface water. The Discharger is currently covered under a Notice of Applicability (NOA) for the Limited Threat General Order R5-2016-0076, which has been renewed by Order R5-2022-0006. Based on the application packet submitted by the Discharger, staff has determined that the project meets the required conditions for approval under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order), as a liquid mine waste discharge. This project is hereby assigned Limited Threat General Order R5-2022-0006-028 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002. Please reference your Limited Threat General Order number, **R5-2022-0006-028**, in your correspondence and submitted documents.

The project activities shall be operated in accordance with the requirements contained in the Limited Threat General Order and as specified in this NOA. You are urged to familiarize yourself with the entire contents of the enclosed Limited Threat General Order (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2022-0006_npdes.pdf).

CALIFORNIA TOXICS RULE / STATE IMPLEMENTATION POLICY MONITORING

The Limited Threat General Order incorporates the requirements of the California Toxics Rule (CTR) and the State Water Resources Control Board's (State Water Board), *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, 2005, also known as the State Implementation Policy (SIP). Screening levels for CTR constituents and other constituents of concern are found in Attachment I of the Limited Threat General Order.

Review of your water quality data in comparison to the screening values, showed reasonable potential for the discharge to cause or contribute to an exceedance of water quality objectives for pH and chronic whole effluent toxicity in the unnamed tributary to Carson Creek, which is a water of the United States.

PROJECT DESCRIPTION

The Carson Hill Gold Mine is located four miles southeast of the City of Angels Camp, in the central Sierra Nevada foothills in Calaveras County. The mine site includes a 64-acre open side cut, three former heap leach pads, four waste rock dumps, and a water supply pond known as the Stevenot Impoundment. In January 2007, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) issued Cleanup and Abatement Order R5-2007-0700 directing the Discharger to address water quality impacts and develop a mine closure plan. To comply with Order R5-2007-0700, the Discharger constructed a water treatment plant (Facility) and began operation in February 2008.

The influent water to the Facility is from 1) a natural spring where a drain collection system was installed in 2007; 2) from three drains constructed underneath three waste management units (WMUs); and 3) water removed from within WMUs 1 and 2. The WMUs, designated WMU 1-3, are the locations where crushed ore was leached in heaps that were created during the open pit mining period from 1986 to1989, under the ownership of the Carson Hill Gold Mining Corporation. The Discharger has constructed temporary impermeable covers on the WMUs as an interim measure to control infiltration. Planning and design are currently underway for final closure of the WMUs.

The Facility consists of a reverse osmosis nanofiltration system with greensand filters for manganese removal. The design flow rate is 133 gallons per minute (gpm) (0.191 million gallons per day (MGD)), which consists of approximately 100 gpm (0.144 MGD) of treated effluent and approximately 33 gpm (0.5 MGD) of saline brine reject stream. The brine reject stream is stored in two 500,000-gallon storage tank (Tanks 14 and 15) or within ore residue in WMU-3 if the tanks are full. During the dry season, the water in Tanks 14 and 15 and within WMU-3 is evaporated on top of the temporary cover of WMU-3. Salt residue from the evaporation operations accumulates on top of the cover. At the beginning of fall or end of summer, the salt residue from evaporation is removed from the cover and disposed at an off-site landfill and the WMU cover is cleaned. The WMU-3 surface is typically power washed with treated effluent and the rinse water is placed into the ore residue in WMU-3.

The total volume of water to be managed on an annual basis does not require continuous operation of the Facility throughout the year. Instead, the Facility is operated on a batch basis, typically during business hours, that may last less than a day or up to several months at a time. The average discharge flow based on flow data collected from 2019 through 2022 is approximately 5.3 million gallons per year. On days when the treatment plant was operated, the Average Daily Discharge was approximately 41,000 gallons per day.

Treated effluent from the Facility is discharged to an unnamed tributary of Carson Creek that flow into New Melones Reservoir or sent to Stevenot Pond or a holding tank for storage and on-site use.

DISCHARGE PROHIBITIONS
Discharge prohibitions are specified in Section IV Discharge Prohibitions of the Limited Threat General Order. Based on the information provided in the NOI, the following discharge prohibitions are applicable to this discharge:

- Prohibition IV.A
- Prohibition IV.B
- Prohibition IV.C
- Prohibition IV.D. The average daily flow rate shall not exceed 0.5 MGD.

EFFLUENT LIMITATIONS
Effluent limitations are specified in Section V. Effluent Limitations and Discharge Specifications of the Limited Threat General Order. Based on the information provided in the NOI, effluent limitations are only required for the parameters identified in items 1-3, below:

1. **pH (Section V.A.1.b.i).** The pH of all limited threat discharges within the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County) shall at all times be within the range of 6.5 and 8.5.

2. **Whole Effluent Toxicity, Chronic (Section V.A.2.a).** There shall be no chronic toxicity in the discharge.

3. **Salinity (Section V.A.1.d.ii).** For a calendar year, the annual average effluent electrical conductivity shall not exceed 900 µmhos/cm.

New Melones Reservoir is listed for Mercury on the Clean Water Act 303(d) List of impaired water bodies. A Total Maximum Daily Load (TMDL) has not yet been established for New Melones Reservoir. Therefore, no additional 303(d) based effluent limitations or monitoring requirements are included in this NOA.

RECEIVING WATER LIMITATIONS
The Limited Threat General Order includes receiving surface water limitations in Section VIII.A. Based on the information provided in the NOI, only the following receiving surface water limitations are applicable to this discharge:

- Bacteria (VIII.A.2);
- Biostimulatory substances (VIII.A.3);
- Chemical constituents (VIII.A.4);
- Color (VIII.A.5);
- Dissolved oxygen (VIII.A.6.a.iv);
- Floating material (VIII.A.7);

- Oil and grease (VIII.A.8);
- pH (VIII.A.9.a);
- Pesticides ((VIII.A.10);
- Radioactivity (VIII.A.11);
- Suspended sediments (VIII.A.12);
- Settleable substances (VIII.A.13);
- Suspended material (VIII.A.14);
- Taste and odors (VIII.A.15);
- Temperature (VIII.A.16.a);
- Toxicity (VIII.A.17); and
- Turbidity (VIII.A.18.a).

MONITORING AND REPORTING

Monitoring and reporting requirements are contained in Attachment C of the Limited Threat General Order. The Discharger is required to comply with the following specific monitoring and reporting requirements for the effluent and receiving water in accordance with Attachment C of the Limited Threat General Order.

Monitoring Locations – The Discharger shall monitor the effluent and receiving water at the specified location as follows:

Table 2. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	A location where a representative sample of the effluent can be collected prior to discharging to the unnamed tributary to Carson Creek.
--	RSW-001	The unnamed tributary to Carson Creek, approximately 200 feet upstream from the point of discharge.
--	RSW-002	The unnamed tributary to Carson Creek, approximately 200 feet downstream from the point of discharge.

Effluent Monitoring – When discharging to surface water, the Discharger shall monitor the effluent at EFF-001 in accordance with Table C-3 of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 3 and subsequent Table 3 Notes:

Table 3. Effluent Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Discharge Flow Rate	MGD	Calculated	1/Day
Electrical Conductivity @ 25 ?C	µmhos/cm	Grab	1/Month
pH	standard units	Grab	1/Week
Turbidity	NTU	Grab	1/Month
Temperature	°F	Grab	1/Month
Dissolved Oxygen (DO)	mg/L	Grab	1/Month
Chronic Toxicity	--	Grab	1/Project Term

Table 3 Notes

1. **Electrical conductivity, pH, turbidity, temperature, and DO.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
2. **All parameters, except flow.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
3. **Chronic toxicity.** Chronic toxicity testing shall be conducted within 3 months of initiation of discharge. See the Monitoring and Reporting Program (Attachment C, Section V) for toxicity monitoring requirements.

Section II.B.2 of the Limitations and Discharge Requirements section of the Limited Threat General Order requires that dischargers submit new analytical results every 5 years for pollutants specified in Table I-1 of Attachment I. The Project is considered a liquid mine waste discharge. Therefore, the Discharger shall submit monitoring results by **01 November 2028** for the following constituents shown in Table 4 and subsequent Table 4 Notes, below:

Table 4. Effluent Characterization Monitoring

Parameter	Units	Sample Type
Dissolved Oxygen (DO)	mg/L	Grab
Hardness	mg/l	Grab
pH	standard units	Grab
Temperature	°F	Grab

Parameter	Units	Sample Type
Electrical Conductivity @ 25 ?C	µmhos/cm	Grab
Total Dissolved Solids (TDS)	mg/L	Grab
Turbidity	NTU	Grab
CTR Priority Pollutants	See Attachment I, Table I-3 of the Limited Threat General Order	See Attachment I, Table I-3 of the Limited Threat General Order
Aluminum, Total	µg/L	Grab
Dissolved Organic Carbon (DOC)	mg/L	Grab
Iron, Total	µg/L	Grab
Manganese, Total	µg/L	Grab

Table 4 Notes

1. **For all parameters.** The Discharger is not required to conduct effluent monitoring for constituents that have already been sampled in a given month, as required in Table 3, except for hardness, pH, and temperature, which shall be conducted concurrently with the effluent sampling.
2. **For all parameters.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
3. **For DO, pH, temperature, electrical conductivity, TDS, and turbidity.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
4. **For CTR Priority Pollutants.** See Attachment I, Table I-3 of the Limited Threat General Order.

Receiving Water Monitoring - When discharging to surface water and upstream flow is present in the unnamed tributary to Carson Creek, the Discharger shall monitor the receiving water at RSW-001 and RSW-002, in accordance with Table 5 of this NOA. If there is no upstream receiving water flow, monitoring at RSW-001 is not required and the self-monitoring report shall state that monitoring was not conducted due to no upstream receiving water flow. The applicable monitoring requirements are as follows in Table 5 and subsequent Table 5 Notes:

Table 5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity @ 25 ?C	µmhos/cm	Grab	1/Month
pH	standard units	Grab	1/Month
Temperature	°F	Grab	1/Month
Turbidity	NTU	Grab	1/Month

Table 5 Notes

1. **All parameters.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
2. **All parameters except for hardness.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained by the Discharger.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Attention shall be given to the presence or absence of:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens, or coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the Monitoring Report.

Monitoring Report Submittals - Monitoring in accordance with this NOA shall begin upon the date of this NOA. Monitoring Reports shall be submitted to the Central Valley Water Board on a quarterly basis, beginning with the **Fourth Quarter 2023**. This report shall be submitted on or before **1 February 2024.** All Monitoring Reports shall specify the dates during the monitoring period the discharge did or did not occur. If treatment and discharge has not begun there is no need to monitor. However, a certified Monitoring Report must be submitted stating that there has been no discharge. Table 6, below, summarizes the Monitoring Report due dates required under the Limited Threat General Order. Quarterly Monitoring Reports must be submitted until your coverage is formally terminated in accordance with the Limited Threat General Order, even if there is no discharge during the reporting quarter.

Table 6. Monitoring Periods and Reporting Schedule

Monitoring Period for All Sampling Frequencies	Quarterly Report Due Date
First Quarter (1 January through 31 March)	1 May
Second Quarter (1 April through 30 June)	1 August
Third Quarter (1 July through 30 September)	1 November
Fourth Quarter (1 October through 31 December)	1 February of the following year

GENERAL INFORMATION AND REQUIREMENTS

The Discharger must notify Central Valley Water Board staff within 24 hours of having knowledge of 1) the start of the first discharge of each month, and 2) noncompliance. The Central Valley Water Board shall be notified immediately if any effluent limit violation is observed during implementation of the project.

Discharge of material other than what is described in the application is prohibited. The required annual fee (as specified in the annual invoice you will receive from the State Water Resources Control Board) shall be submitted until this NOA is officially terminated. You must notify this office in writing when the discharge regulated by the Limited Threat General Order is no longer necessary by submitting the Request for Termination of Coverage (Attachment E). If a timely written request is not received, the Discharger will be required to pay additional annual fees as determined by the State Water Resources Control Board.

ENFORCEMENT

Failure to comply with the Limited Threat General Order may result in enforcement actions, which could include civil liability. Effluent limitation violations are subject to a Mandatory

Minimum Penalty (MMP) of $3,000 per violation. In addition, late Monitoring Reports may be subject to MMPs or discretionary penalties of up to $1,000 per day late. When discharges do not occur during a quarterly monitoring period, the Discharger must still submit a quarterly certified Monitoring Report indicating that no discharge occurred to avoid being subject to enforcement actions.

COMMUNICATION

We have transitioned to a paperless office; therefore, please convert all documents to a searchable Portable Document Format (pdf). All documents, including Monitoring Reports, written notifications, and documents submitted to comply with this NOA and the Limited Threat General Order, should be submitted to the NPDES Compliance and Enforcement Unit, Attention: Mohammad Farhad at centralvalleysacramento@waterboards.ca.gov and mohammad.farhad@waterboards.ca.gov. Mr. Farhad may also be reached by phone at (916) 464-1181.

Please include the following information in the body of the email:

- Attention: NPDES Compliance Unit
- Discharger: Carson Hill Gold Mining Corporation
- Facility: Carson Hill Gold Mine
- County: Calaveras County
- CIWQS place ID: 213373

Documents that are 50 megabytes or larger must be transferred to a DVD, or flash drive and mailed to our office, attention “ECM Mailroom-NPDES".

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Links to the law and regulations applicable to filing petitions may be found on the Petitions Home Page (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

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For Patrick Pulupa, Executive Officer

Enclosures (2): Attachment A - Project Location Map
Monitoring Report Transmittal Form (Discharger only)

cc: Elizabeth Sablad, U.S. EPA, Region IX, San Francisco (email only)
Peter Kozelka, U.S. EPA, Region IX, San Francisco (email only)
Prasad Gullapalli, U.S. EPA Region IX, San Francisco (email only)
Division of Water Quality, State Water Board, Sacramento (email only)
Sarah Torres, PG Environmental, Chantilly, Virginia (via email)

ATTACHMENT A – PROJECT LOCATION MAP