
Central Valley Regional Water Quality Control Board

1 September 2017

Theresa Ballaine
Project Manager
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NOTICE OF APPLICABILITY (NOA); GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0076 FOR LIMITED THREAT DISCHARGES TO SURFACE WATER; CARSON HILL GOLD MINE PROJECT, CALAVERAS COUNTY

Our office received a Notice of Intent application on 26 July 2017 from Carson Hill Gold Mining Corporation (hereinafter Discharger), for continued coverage of the discharge of treated groundwater to surface water. The Discharger is currently covered under a Notice of Applicability (NOA) for the Limited Threat General Order R5-2013-0073, which has been renewed by Order R5-2016-0076. 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), Tier 3. This project is hereby assigned Limited Threat General Order R5-2016-0076-014 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002. Please reference your Limited Threat General Order number, **R5-2016-0076-014**, in your correspondence and submitted documents.

The enclosed Limited Threat General Order may also be viewed at the following web address: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076_mod.pdf. You are urged to familiarize yourself with the contents of the entire document. The Limited Threat General Order prescribes mandatory discharge monitoring and reporting requirements. The project activities shall be operated in accordance with the requirements contained in this NOA and the Limited Threat General Order.

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 no reasonable potential for the discharge to cause or contribute to an exceedance of water quality objectives in the unnamed tributary to Carson Creek.

PROJECT DESCRIPTION

The Carson Hill Gold Mine is located four miles southeast of the City of Angels, 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 the Discharger constructed a wastewater treatment plant (Facility) and began operation in February 2008. The Discharger has historically discharged treated groundwater from the Facility to an unnamed tributary to Carson Creek that flows to New Melones Reservoir under the Limited Threat General Order R5-2008-0082-023 and R5-2013-0073-023, and proposes to continue this activity under the renewed Limited Threat General Order R5-2016-0076.

The Facility consists of one primary treatment system with two supplemental treatment systems that can be used as needed. The primary treatment system consists of reverse osmosis membranes that can be operated in series or parallel. The design flow rate is 0.12 million gallons per day (MGD), which results in a design capacity of 0.09 MGD of treated effluent and 0.03 MGD of saline brine reject stream. The treated effluent is discharged to surface water and the brine reject stream is stored in a 500,000 gallon storage tank (Tank 15) or within ore residue in WMU-3 if the tank is full. During the dry season the water in Tank 15 and within WMU-3 is evaporated at a mechanically-enhanced evaporation system constructed 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 evaporation equipment is removed and the surface of the cover is cleaned by scraping the solids and then rinsing. The solids are hauled to an off-site landfill. The rinse water is placed into either Tank 15 or back into the ore residue in WMU-3.

The influent wastewater to the Facility is from a natural spring where a drain collection system was installed in 2007 and from the leachate collection and recovery system underneath three waste management units (WMUs). 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 to 1989, 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 projected annual discharge duration is approximately 270 days in length, and the projected discharge flow based on flow data collected in 2017 is approximately 10.5 million gallons per year. Averaged over an entire year this equates to an approximate Average Daily Discharge of 28,000 gallons per day.

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, only effluent limitations for pH, as specified in Section V.A.1 of the Limited Threat General Order, are applicable to this discharge. The applicable effluent limitations are shown below:

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

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.b.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);
- 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 in Table 1:

Table 1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description¹
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.

¹ See enclosed Project Map

Effluent Monitoring – When discharging to the unnamed tributary to Carson Creek, the Discharger shall monitor the effluent at EFF-001 in accordance with Table C-2 of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 2.

Table 2. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Flow	MGD	Estimate	1/Day	--
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/Month	1,2
pH	standard units	Grab	1/Day	1,2
Turbidity	NTU	Grab	1/Month	1,2
Temperature	°F	Grab	1/Month	1,2
Dissolved Oxygen	mg/L	Grab	1/Month	1,2

¹ 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 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.

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 Tier 3 discharge. Therefore, the Discharger shall submit monitoring results by 20 June 2022 for the following constituents shown in Table 3, below:

Table 3. Effluent Characterization Monitoring

Parameter ¹	Units	Sample Type	Required Analytical Test Method
Dissolved Oxygen (DO)	mg/L	Grab	1, 2
Hardness	mg/l	Grab	2
pH	standard units	Grab	1, 2
Temperature	°F	Grab	1, 2
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1, 2
Total Dissolved Solids (TDS)	mg/L	Grab	2
Turbidity	NTU	Grab	1, 2
Aluminum, Total Recoverable	µg/L	Grab	2
Iron, Total Recoverable	µg/L	Grab	2
Manganese, Total Recoverable	µg/L	Grab	2
CTR Priority Pollutants ³	µg/L	Grab	2
Standard Minerals ⁴	--	Grab	2
Acute Toxicity	% survival	Grab	2,5

Parameter ¹	Units	Sample Type	Required Analytical Test Method
Chronic Toxicity	--	Grab	^{2,6}

- ^{1.} A hand-held field meter may be used, provided the meter utilizes a USEPA-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.} 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.} See Attachment I, Table I-3 of the Limited Threat General Order.
- ^{4.} Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
- ^{5.} For acute toxicity testing, the test species shall be fathead minnows (*Pimephales promelas*). See the Monitoring and Reporting Program (Attachment C) for toxicity monitoring requirements.
- ^{6.} In accordance with the Limited Threat General Order, chronic whole effluent toxicity testing shall be conducted as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002, which allows for the adjustment of effluent hardness to represent the actual measured hardness of the receiving water.

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 C-3 of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 4:

Table 4. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/Month	^{1, 2}
pH	standard units	Grab	1/Month	^{1,2}
Temperature	°F	Grab	1/Month	^{1,2}
Turbidity	NTU	Grab	1/Month	^{1,2}

- ^{1.} Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
- ^{2.} A hand-held field meter may be used, provided the meter utilizes a USEPA-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.

Monitoring Report Submittals - Monitoring in accordance with this NOA shall begin upon the date of this NOA. Monitoring reports shall continue to be submitted to the Central Valley Water Board on a quarterly basis. Table 5, 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 5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Quarterly Report Due Date
1/Day, 1/Week, 1/Month, 1/Quarter	1 September 2017	1 May (1 Jan – 31 Mar) 1 Aug (1 Apr – 30 Jun) 1 Nov (1 Jul – 30 Sep) 1 Feb, of following year (1 Oct – 31 Dec)

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 billing 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 of the Limited Threat General Order). 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 report monitoring period, the Discharger must still submit a certified quarterly Monitoring Report Transmittal Form (see attached) indicating that no discharge occurred to avoid being subject to enforcement actions.

COMMUNICATION

All documents, including monitoring reports, response to inspections, written notifications, and documents submitted to comply with this NOA and the Limited Threat General Order, should be submitted to the NPDES Compliance Unit, attention Kari Holmes. Ms. Holmes can be reached at (916) 464-4623 or kari.holmes@waterboards.ca.gov.

We have transitioned to a paperless office, therefore, please convert all documents to a searchable Portable Document Format (pdf) and email them to centralvalleysacramento@waterboards.ca.gov. **Please include the following information in the email:** Attention: NPDES Compliance section; Discharger: Carson Hill Gold Mining Corporation; Facility: Carson Hill Gold Mine Project; County: Calaveras; and the CIWQS place ID 777797 in the body of the email. 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". Please include the attached Monitoring Report Transmittal Form as the first page of each monitoring report.

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

Theresa Ballaine
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Carson Hill Gold Mine Project

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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. Copies of the law and regulations applicable to filing petitions may be found on the internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

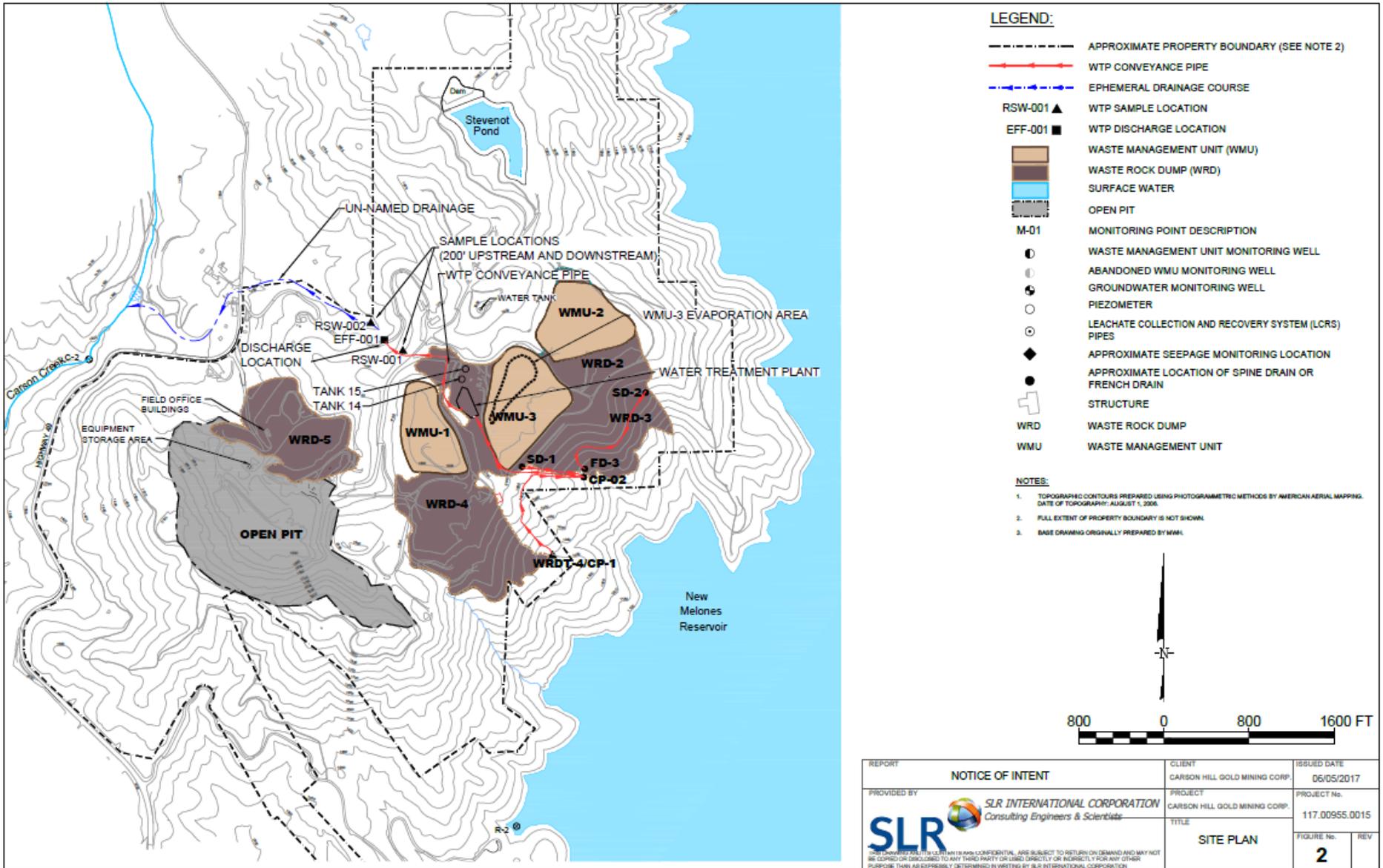
ORIGINAL SIGNED BY ADAM LAPUTZ FOR

Pamela C. Creedon
Executive Officer

Enclosures (3): General Order R5-2016-0076 (Discharger only)
 Monitoring Report Transmittal Form (Discharger only)
 Project Map

cc: David Smith, U.S. EPA, Region IX, San Francisco (email only)
 Division of Water Quality, State Water Board, Sacramento (email only)

Project Map – Carson Hill Gold Mine Project
 Site and Discharge Location Map
 R5-2016-0076-014



REPORT	NOTICE OF INTENT	CLIENT	CARSON HILL GOLD MINING CORP.	ISSUED DATE	06/05/2017
PROVIDED BY	SLR INTERNATIONAL CORPORATION <i>Consulting Engineers & Scientists</i>	PROJECT	CARSON HILL GOLD MINING CORP.	PROJECT No.	117.00955.0015
		TITLE	SITE PLAN	FIGURE No.	2

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