ATTACHMENT B— REVISED MONITORING AND REPORTING PROGRAM

A. General Monitoring Requirements

1. **Representative Sampling.** All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the chain of custody form for the sample. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved in writing by Regional Water Board staff.

2. **Instrumentation and Calibration.** All monitoring instruments and devices used by the Discharger shall be properly maintained and calibrated to ensure their continued accuracy. Any flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices. In the event that continuous monitoring equipment is out of service for a period greater than **24 hours**, the Discharger shall obtain representative grab samples each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. The Discharger shall report the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

3. **Field Test Instruments.** Field test instruments (e.g., those used to test pH, dissolved oxygen, and electrical conductivity) may be used provided:

    a. The user is trained in proper use and maintenance of the instruments,

    b. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer,

    c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency, and

    d. Field calibration reports are submitted.

4. **30-Day Sample Collection Limitation.** For any given monitored medium, the samples collected from all monitoring points and background monitoring points to satisfy the data analysis requirements for a given reporting period shall all be collected within a span not to exceed 30 days,

unless a longer time period is approved by the Executive Officer and shall be collected in a manner that ensures sample independence to the greatest extent feasible.[1]

5. **Testing and Analytical Methods.** The collection, preservation, and holding times of all samples shall be performed in accordance with USEPA-approved procedures. Except as otherwise specified in the MRP or as approved in writing by the Executive Officer, all analyses shall be conducted in accordance with the latest editions of either of the USEPA's *Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act* (40 C.F.R. part 136); or *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium* (SW-846).

6. **Laboratory Certification.** Except as otherwise approved in writing by the Executive Officer, all analyses shall be conducted by a laboratory certified by the State Water Board, Division of Drinking Water Environmental Laboratory Accreditation Program (ELAP).

7. **Records Retention.** The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, for a minimum of five years from the date of the sampling or measurement. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurement(s);

    b. The individual(s) who performed the sampling or measurement(s);

    c. The methods used for groundwater purging/sampling;

    d. The date(s) analyses were performed;

    e. The individual(s) who performed the analyses;

    f. The analytical techniques or method used; and

    g. All sampling and analytical results, including units of measurement used, minimum reporting limit for the analyses, results less than the

[1] The 30-day limit does not apply to media that (1) are resampled to confirm the results of the initial round of samples, or (2) are resampled due to errors in the original sampling and analysis, but the Discharger shall conduct the resampling as expeditiously as practical.

reporting limit but above the method detection limit (MDL), data qualifiers and a description of the qualifiers, quality control test results (and a written copy of the laboratory quality assurance plan), dilution factors, if used, and sample matrix type.

B. Detection Monitoring Program

1. General Requirements

a. To detect a release at the earliest possible opportunity (Title 27, § 20420, subd. (b)), the Discharger shall implement a Detection Monitoring Program (DMP) for groundwater, the unsaturated zone and surface water in accordance with the provisions of Title 27, particularly sections 20415 and 20420.[2] A separate DMP is required for each "Group B" Mining Unit.

b. Additional monitoring points shall be added as necessary to provide the best assurance of the earliest possible detection of a release. (Title 27, § 20415, subd. (b)(1)(B)2.)

2. Groundwater

a. **General Standards.** The Discharger shall operate and maintain a groundwater monitoring system that complies with the applicable provisions of Title 27, sections 20415 and 20420. Monitoring shall be performed in accordance with the locations, frequencies, and parameters described below.

b. **Monitoring Well Locations.** The Facility's groundwater monitoring network currently consists of the wells listed below in Table B-1. The groundwater monitoring system shall include a sufficient number of monitoring points, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer and any perched groundwater that represents the quality of

[2] The Colorado River Basin Water Board Executive Officer may waive detection monitoring for the unsaturated zone and/or surface waters, based on demonstrations in the WQMP. (See Title 27, § 20415, subds. (c)(1), (d)(5).)

groundwater that has not been affected by a release from each Unit. (Title 27, §§ 20415(b)(1)(A)-(B), 20420(b).)

Table B-1. Groundwater Monitoring Well Network.

Well	Location	Screening Depth (ft.)	Function
GW-1	SW of Mining Units. Furthest Downgradient.	317-416 (basement rock)	Detection
GW-2	S of Mining Units; E of GW-1.	207-305 (Bear Canyon Conglomerate)	Detection
GW-3A	S of Mining Units; N of GW-2.	196-296 (Bear Canyon Conglomerate)	Detection
GW-4A	N of Mining Units and GW-6.	209-309 (basement rock)	Detection
GW-5	SW of Mining Units; N of GW-1.	259-359 (Bear Canyon Conglomerate)	Detection
GW-6	N of HLPs 1-8; S of former Vista HLP and GW-4A.	238-338 (Bear Canyon Conglomerate)	Detection
GW-7A	N of Mining Units, Furthest Upgradient.	190-442 (Bear Canyon Conglomerate)	Background

c. **Groundwater Conditions.** Each quarter, the Discharger shall monitor Groundwater Conditions specified in Table B-3. To the extent feasible, this information shall be determined separately for: (1) the uppermost aquifer; (2) any zones of perched water; and (3) any additional zone of saturation monitored based upon water level elevations taken prior to the collection of the water quality data submitted in the report. (Title 27, § 20415, subd. (e)(15).) Such information shall be reported semiannually.

Table B-2. Groundwater Conditions Monitoring.

Conditions	Units	GeoTracker Code	Monitoring Freq.	Reporting Freq.
Elevation (Well-Specific)	ft bgs	ELEV	Quarterly	Semiannually
Gradient / Direction	-	(none)	Quarterly	Semiannually
Flow Rate	ft. / year	(none)	Quarterly	Semiannually

d. **Monitoring Parameters.** All monitoring wells shall be sampled and analyzed for the Monitoring Parameters listed in Table B-3, in accordance with the specified frequencies. (Title 27, § 20420, subds. (e)-(f).) Whenever a well is sampled, the groundwater elevation, temperature, electrical conductivity, turbidity, and pH shall be accurately measured at each well. (Title 27, § 20415, subd. (e)(13).)

Table B-3. Monitoring Parameters.

Monitoring Parameter	Units	GeoTracker Code	Monitoring Freq.	Reporting Freq.
Temperature	°F	TEMP	Semiannually	Semiannually
Electrical Conductivity	µmhos/cm	SC	Semiannually	Semiannually
pH	SU	PH	Semiannually	Semiannually
Turbidity	NTU	TURB	Semiannually	Semiannually

Monitoring Parameter	Units	GeoTracker Code	Monitoring Freq.	Reporting Freq.
Total Dissolved Solids (TDS)	mg/L		Semiannually	Semiannually
Free Cyanide	mg/L		Semiannually	Semiannually
Total Cyanide	mg/L		Semiannually	Semiannually
Copper	µg/L		Semiannually	Semiannually
Arsenic	µg/L		Semiannually	Semiannually
Iron	µg/L		Semiannually	Semiannually
General Chemistry (Ca, Mg, Na, SO4)	mg/L		Semiannually	Semiannually

e. **Five-Year Constituents of Concern.** Beginning in 2025, the Discharger shall analyze groundwater samples for the Constituents of Concern (COCs) listed in Table B-4 every five years. (Title 27, § 20395, subd. (a).)[3] Results of such monitoring shall be reported in the next Semiannual Monitoring Report.

Table B-4. Five-Year Constituents of Concern.

Constituent of Concern	Units	GeoTracker Code
Antimony	mg/l	
Cadmium	mg/l	
Cobalt	mg/l	
Lead	mg/l	

[3] COCs are the list of “waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the [Mining] Unit.” (Title 27, § 20395, subd. (a).)

Constituent of Concern	Units	GeoTracker Code
Mercury	mg/l	
Nickel	mg/l	
Vanadium	mg/l	
Zinc	mg/l	

3. Unsaturated Zone

a. Soil-pore gas and liquid samples shall be collected from the monitoring points listed in Table B-5, as well as any subsequently-installed soil gas wells, and analyzed for the Monitoring Parameters in Table B-6 and Table B-3.

b. A log must be maintained of when the vadose zone wells are sampled, including when the sample was taken, by whom, and results. The log shall be maintained on site and shall be available for inspection.

c. Any detection of cyanide gas shall be reported by email to Regional Water Board staff within 24 hours. The Discharger shall thereafter submit a follow-up report with any information specified by staff in a technical reporting order. (Wat. Code, § 13267, subd. (b)(1).)

Table B-5. Soil-Gas Wells.

Soil-Gas Wells	**Location**
V02	South of HLP 1-4, East of V03 and V04
V03	South of HLP 1-4, in-Between of V02 and V04
V04	South of HLP 1-4, West of V03 and V02
V06A	Adjacent (East) of Event Pond, South of V06B
V06B	Adjacent (East) of Event Pond, North of V06A
V06C	Adjacent (West) of Event Pond and Pregnant Pond, South of V06D

Soil-Gas Wells	Location
V06D	Adjacent (West) of Event Pond and Pregnant Pond, North of V06C
V11B	West of HLP 1-4
V12 (A, B, C)	West of HLP 1-4
V25A	South of HLP 5-6, West of V26A and V27
V26A	South of HLP 5-6, in-Between of V25A and V27
V27	South of HLP 5-6, East of V25A and V26A

Table B-6. Soil Gas Wells Monitoring Parameters.

Parameter	Units	Sample Type	Monitoring	Reporting
Cyanide Gas[4]	PPM	Grab	Semiannual	Semiannual (Non-Detections) Within 48 Hours of Detections (see above)

4. Establishment of Concentration Limits

d. The Discharger shall establish a Concentration Limit (i.e., background value) for each Monitoring Parameter and Constituent of Concern (COC) at each Monitoring Point, in accordance with the statistical methods in subdivision (e)(8) of Title 27, section 20415.[5] (Title 27, § 20400, subds. (a), (b).).

[4] Non-detections of Cyanide Gas (including total cyanide or free cyanide) shall be reported accordingly.

[5] The Concentration Limit for organic compounds that are neither naturally occurring, nor detected in background groundwater samples, shall be taken as the detection limit of the analytical method used (e.g., USEPA Methods 8260, 8270).

e. Updated Concentration Limits shall be proposed by the Discharger every five years, and submitted via the Annual Monitoring Report. Unless expressly rejected by the Regional Water Board's Executive Officer in writing, the updated Concentration Limits shall be used to determine whether there has been a release from the Unit.

f. If the Discharger fails to submit updated Concentration Limits, the existing ones shall remain operative, provided that, where appropriate, the Regional Water Board's Executive Officer may revert to lower concentrations where so warranted by existing monitoring data.

5. Procedures to Confirm Evidence of Release

a. **Verification Sampling after Detection of Constituent of Concern.** Whenever a COC is detected at a Monitoring Point at a concentration exceeding the applicable Concentration Limit the Discharger shall conduct verification sampling to confirm if the exceedance is due to a release, or if it is a false-positive (unless previous monitoring has already confirmed a release for that constituent at that monitoring point). An exceedance of the Concentration Limit shall be considered "measurably significant evidence of a release" that shall be either confirmed or denied through the applicable verification procedure specified below.

b. **Procedure for Analytes Detected in Less than 10 Percent of Background Samples (Non-Statistical Method).**

i. **Initial Determination.** The Discharger shall identify each analyte in the current DMP Monitoring Point sample that exceeds either its respective MDL or PQL, and for which a release has not been previously confirmed. The Discharger shall conclude that the exceedance provides a preliminary indication of a release or a change in the nature or extent of the release, at that monitoring point, if either: (i) The data contains two or more analytes that equal or exceed their respective MDLs; or (ii) the data contains one or more analyte that equals or exceeds its PQL.

ii. Notification to Regional Water Board Staff. Upon determining that there is a preliminary indication of a release, the Discharger shall immediately notify Regional Water Board staff by phone or email (not required if Board

staff made the determination in writing and notified Discharger).

iii. Discrete Retest. Within 30 days of either the Discharger or the Regional Water Board determining that there is a preliminary indication of a release, the Discharger shall collect two new (retest) samples from the relevant monitoring point(s), and analyze the samples for COCs at issue. (Title 27, §§ 20415(e)(8)(E), 20420(j)(1)-(3).)

iv. Confirmation of Release. As soon as the retest data are available, the Discharger shall conclude that measurably significant evidence of a release is confirmed if (not including the original sample) two or more analytes equal or exceed their respective MDLs or if one or more analyte equals or exceeds its PQL. The Discharger shall then immediately verbally notify the Regional Water Board whether or not the retest confirmed measurably significant evidence of a release for the analyte at the monitoring point, and follow up with written notification submitted by certified mail within seven days of the verbal notification.

c. **Procedure for Analytes Detected in 10 Percent or More of Background Samples (Statistical or Non-Statistical Method).**

i. **Initial Determination.** The Discharger shall compare the value reported by the laboratory for each analyte to the statistically-derived Concentration Limit from the most recent report (e.g., Annual Report) that uses the approved statistical procedure. If the value exceeds the Concentration Limit for that analyte, the Discharger shall conclude that there is "measurably significant evidence of a release." (Title 27, § 20420, subd. (i).)

ii. Notification to Regional Water Board Staff. Upon determining that there is a preliminary indication of a release, the Discharger shall *immediately notify Regional Water Board staff* by phone or email (not required if Board staff made the determination in writing and notified Discharger).

iii. **Retest Method.** Within 30 days of either the Discharger or the Regional Water Board determining that there is a preliminary indication of a release, the Discharger shall implement a verification procedure/retest option in

accordance with Title 27, section 20415, subdivision (e)(8)(E) and section 20420, subdivision (j)(2). (Title 27, §§ 20415(e)(8)(E), 20420(j).) The verification procedure shall include either a single "composite" retest (i.e., a statistical analysis that augments and reanalyzes the data from the monitoring point that indicated a release), or shall consist of at least two "discrete" retests (i.e., statistical analyses each of which analyzes only newly acquired data from the monitoring point that indicated a release).[6] (Title 27, § 20415, subd. (e)(8)(E).)

The retest samples shall be collected from the monitoring point where the release is preliminarily indicated and shall be analyzed for the constituents that caused the need for the retest. For any indicated monitoring parameter or constituent of concern, if the retest results of one or more of the retest data suites confirm the original indication, the Discharger shall conclude that measurably significant evidence of a release has been confirmed.

The Discharger shall then immediately verbally notify the Regional Water Board whether or not the retest confirmed measurably significant evidence of a release for the analyte at the monitoring point, and follow up with written notification submitted by certified mail within seven days of the verbal notification.

d. Next Steps After Confirmation. If a release has been confirmed under either of the procedures above, the Discharger shall comply with the Response to Release Requirements in Section A.6 below. If the analyte at issue is a Five-Year COC, that analyte shall be added to list of Monitoring Parameters that are monitored on a more frequent basis.

e. Physical Evidence of a Release. If the Discharger determines that there is significant physical evidence of a release, the Discharger shall immediately verbally notify Regional Water Board staff and

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[6] The Discharger may use an alternate method previously approved in writing by the Regional Water Board. The verification procedure shall comply with the requirements of Title 27, section 20415, subdivision (e)(8)(E), in addition to the performance standards of section 20415, subdivision (e)(9).

provide written notification by certified mail within seven days of such determination. (Title 27, §§ 20385(a)(3), 20420(l)(1)-(2).)

6. Response to Release Requirements

a. If the Discharger confirms that there is "measurably significant evidence of a release" per Section B.b or B.c, the Discharger shall comply with the time schedule of required actions in Table B-7 below.

b. If the Discharger confirms that there is measurably significant evidence of a release from the Mining Unit at any monitoring point, the Discharger may attempt to demonstrate that a source other than the Mining Unit caused the evidence of a release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in groundwater, surface water, or the unsaturated zone.

c. The Discharger may make a demonstration pursuant to section 20420, subdivision (k)(7); however, the Discharger is not relieved of the requirements and due dates of Title 27, sections 20420, subdivision (k)(6)-(7), unless Regional Water Board staff concur that the demonstration successfully shows that a source other than the Mining Unit caused the evidence of a release or that the evidence resulted from error in sampling, analysis, or statistical evaluation or from natural variation in groundwater, surface water, or the unsaturated zone.

d. In order to make this demonstration, the Discharger shall notify the Regional Water Board by certified mail of the intent to make the demonstration **within seven days** of determining measurably significant evidence of a release, and shall submit a report **within 90 days** of determining measurably significant evidence of a release. (Title 27, § 20420, subd. (k)(7).)

Table B-7. Time Schedule of Required Actions After Confirming Measurably Significant Evidence of Release.

Deadline	Required Action
Immediately after Confirmation	***Additional Sampling*** The Discharger shall sample all monitoring points in the affected medium at that Mining Unit and determine the concentration of all monitoring parameters and constituents of concern for comparison with established concentration limits (CLs). Because this constituent of concern (COC) scan does not involve statistical testing, the Discharger will need to collect and analyze only a single water sample from each monitoring point in the affected medium (Title 27, § 20420, subd. (k)(1))
Within 90 Days of Confirmation	***Submit Evaluation Monitoring Program*** The Discharger shall submit a Report of Waste Discharge (ROWD) with a proposed Evaluation Monitoring Program (EMP) in accordance with Title 27, section 20420, subdivision (k)(5)(A)-(D), and incorporating the results of the immediate post-confirmation sampling activities required above. Specifically, the EMP shall be designed for the collection and analysis of all data necessary to assess the nature and extent of the release and to determine the spatial distribution and concentration of each constituent throughout the zone affected by the release. (Title 27, §§ 20420(k)(5), 20425(b).) *The EMP is subject to Regional Water Board Executive Officer approval, including with specified revisions. The EMP shall be considered established upon its approval.*
Within 180 Days of Confirmation	***Submit Corrective Action Feasibility Study*** The Discharger shall submit, for Regional Water Board Executive Officer approval, an initial engineering feasibility study for a Corrective Action Program necessary to meet the requirements of Title 27, section 20430. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern. (Title 27, § 20420, subd. (k)(6).)

Deadline	Required Action
Within 90 Days of EMP Approval	The Discharger shall complete and submit the following: (1) Technical Report with EMP results and assessment. (Title 27, § 20425, subd. (b).) (2) Updated Engineering Feasibility Study for corrective action based on data collected to delineate the release and data from the ongoing monitoring program per Title 27, section 20425, subdivision (e). (Title 27, § 20425, subd. (c).) (3) Proposed Corrective Action Program in accordance Title 27, section 20430, based on data collected to delineate the release the updated engineering feasibility study. (Title 27, § 20425, subd. (d).)

C. Other Facility Monitoring

1. Observed Surface Water

If substantial volumes of surface water are observed near a permitted Mining Unit, the Discharger shall record the following information, which shall be reported within 24 hours:

a. Flow rate and source of water;

b. Floating and suspended materials of waste origin: Presence or absence, source, and size of affected area;

c. Discoloration and turbidity: Description of color, source, and size of affected area;

d. Evidence of odors: Presence or absence, characterization, source, and distance of travel from source; and

e. Weather conditions: Wind direction and estimated velocity, total precipitation during the previous five-days and on the day of observation.

2. Stormwater Monitoring

After each Significant Storm Event,[7] the Discharger shall record the remaining freeboard (vertical feet) and storage capacity (gallons and/or acre-feet) of each stormwater retention basin shall be identified. Any stormwater-related actions shall be reported in the next Semiannual Monitoring Report.

3. Seep Monitoring

a. Whenever any seeps (i.e., liquid wastes) are observed emerging from the ground near a permitted Mining Unit, the Discharger shall record the location, flow rate and any other relevant characteristics (e.g., color or odor). This information shall be emailed to Regional Water Board staff as soon as possible and in no case more than 24 hours after the initial discovery.

b. Observed seepages shall, within 30 days of first observance, be sampled and analyzed for the Monitoring Parameters listed in Table B-3 and Constituents of Concern listed in Table B-4, as well as any other constituents or parameters specified in writing by Regional Water Board staff. Results of such analyses shall be reported within seven days of receipt of laboratory report.

4. Leachate Collection and Removal System Monitoring

a. Each Leachate Collection and Removal System (LCRS) shall be tested annually to demonstrate proper operation, with the results of each test being compared to the results of prior testing under similar conditions. (Title 27, § 20340, subd. (d).) Results shall be reported annually.

b. Each LCRS sump shall be inspected monthly for presence of leachate, whereupon the volume of leachate shall be measured. Any leachate present in a sump shall, within 30 days of first observance, be sampled and analyzed for Specific Conductance and pH.

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[7] For purposes of this Order, a “Significant Storm Event” is a weather event that results in at least 1 inch of precipitation within a 24-hour period.

c. As provided in Table B-8, the total volume and flow rate shall be calculated, recorded and reported semiannually.

d. If an automated sump-pump is installed, an alarm shall also be installed to indicate if the sump fills beyond the upper limit of the sump-pump settings. Automated systems shall also include a means of monitoring changes in the height of liquid in the sump and measuring the frequency and volume of pumping. This data shall be converted to a daily leakage rate and summarized in the Semiannual Monitoring Report. Automated sump pumps shall be tested at least quarterly to ensure they are functioning properly.[8]

Table B-8. LCRS Sump Monitoring, Monthly Inspection Parameters.

Physical Parameter	Units	Sampling Freq.	Reporting Freq.
Total Volume Collected	Gallons	Monthly	Semiannually
Estimated Flow Rate	Gallons/Day	Monthly	Semiannually
Percentage of Sump Capacity[9]	%	Monthly	Semiannually

Table B-9. Leachate Accumulation Reporting Thresholds.

Sump #	Reporting Threshold
Pregnant Pond	1,654 Gallons/Day
Intermediate Pond	406 Gallons/Day
Pad 7 New Event Pond Eastern portion	602 Gallons/Day

[8] If the existing manual sump-pump at the Facility is replaced with an automatic sump-pump, the Discharger shall include this information in the Semiannual Monitoring Report.

[9] The total sump capacity shall be specified when reporting this information.

Sump #	Reporting Threshold
Pad 7 New Event Pond Western Portion	602 Gallons/Day
HLP 5-6 Stormwater Sump	359 Gallons/Day
All Other Sumps	85 percent of Total Capacity

e. The volume removed shall be measured and used to identify the leakage rate into each sump. The removal dates, volumes, and calculated leakage rates shall be reported semiannually.

If an automated sump-pump is installed, an alarm shall also be installed to indicate if the sump fills beyond the upper limit of the sump-pump settings. Automated systems shall also include a means of monitoring changes in the height of liquid in the sump and measuring the frequency and volume of pumping. This data shall be converted to a daily leakage rate and summarized in the Semiannual Monitoring Report. Automated sump pumps shall be tested at least quarterly to ensure they are functioning properly.

5. Geosynthetic Liner Monitoring

The Discharger shall inspect the exposed portion of geosynthetic liner of each “Group B” Mining Unit on a monthly basis, with the observations reported on a semiannual basis. Any observed damage to the liner shall be verbally reported to Regional Water Board staff within 48 hours, with a follow-up written report submitted to the Board within seven days.

6. Surface Impoundment Monitoring[10]

a. Each month, the Discharger shall measure the available freeboard for each Surface-Impoundment-type Mining Unit at the Facility. (See Title 27, § 20375, subd. (a).) The available freeboard and

[10] This section applies only to those permitted Mining Units that are surface impoundments, as listed in Attachment A.

calculated storage capacity for such Mining Units shall be recorded and reported semiannually.

b. Each month, the Discharger shall inspect the overall condition of each Surface-Impoundment. The Discharger shall record any observed erosion, settlement or subsidence along the visible areas of the Surface Impoundment(s), including the top of the berm, outer slopes, and upper region of the inner slope. Repairs shall be performed as needed and documented in the inspection logs. Observations and repairs shall be included in the next Semiannual Monitoring Report.

Table B-10. Surface Impoundment Monitoring.

Parameter	Unit	Monitoring Freq.	Reporting Freq.
Available Freeboard	Feet	Monthly	Semiannually
Storage Capacity	Gallons	Monthly	Semiannually
Visual Inspection for Erosion, etc. (see § C.b)	N/A	Monthly	Semiannually
Visual Inspection of Exposed Liner (§ 20375, subd. (f).)	N/A	Weekly	Semiannually

7. Heap Leach Pad Monitoring

The Facility's Heap Leach Pad (HLPs), as listed in Attachment A, shall be monitored in accordance with Table B-11 below.

Table B-11. Heap Leach Pad Monitoring.

Parameter	Unit	Monitoring Freq.	Reporting Freq.
Ore Discharged to Unit for Processing	Tons	Semiannually	Annually
Estimated Life Remaining	Years	Semiannually	Annually

Parameter	Unit	Monitoring Freq.	Reporting Freq.
Estimated Remaining Capacity	%	Semiannually	Annually
Barren Solution Applied	Gallons	Semiannually	Annually
Pregnant Solution Recovered	Gallons	Semiannually	Annually
Visual Inspections	N/A	Monthly	Semiannually

8. Overburden Pile Monitoring

The Facility's generation of "Group C" Mining Waste and overall ground disturbance activities shall be monitored and reported in accordance with Table B-12 below.

Table B-12. "Group C" Mining Waste Monitoring.

Parameter	Unit	Monitoring	Reporting
Tons of Overburden Produced	Tons	Annually	Annually
Acres of Disturbance	Acres	Annually	Annually

D. Reporting Requirements

1. Semiannual Reporting

The Discharger shall submit Semiannual Monitoring Reports including the results of all monitoring activities that are required to be reported on a semiannual basis. Such reports shall be submitted on **August 15** (covering Jan. 1–June 30) and **February 15** (covering July 1–Dec. 31). The report shall include the following components:

a. A cover letter containing:

i. A summary of essential points in report; and

ii. An identification/discussion of any violations occurring since the last report was submitted, as well as any actions taken or planned for correcting those violations (or, if no violations occurred since last submittal, a statement to that effect).[11]

b. Maps depicting the Facility layout and the location of sampling points and monitoring wells, as well as groundwater elevations in the monitoring wells, including the inferred direction of groundwater flow.[12]

c. Written summary of the monitoring results—including a discussion of the groundwater flow rate/direction or any other information suggesting a change in the underlying hydrogeologic conditions.

d. Results of any sampling/analyses/investigations conducted in addition to what is otherwise required under this MRP.

e. Narrative evaluation of the groundwater monitoring data and whether the data indicates a release from any Mining Units.

f. A summary of leachate data for each applicable Mining Unit, including any laboratory results and measurements of gas concentrations and liquids in the gas monitoring wells and the LCRS sumps.

g. Tables of the data collected. The tables shall include all the data collected, to date, at each monitoring point, organized in chronological order, with the oldest data in the top row and progressively newer data in rows below the top row. Each row shall be a separate date and each column shall be a separate parameter at a single location (or a single average, as appropriate). The tables shall be submitted in electronic (Excel or other tab delimited) format. The data shall be summarized in such a manner as to

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[11] If the Discharger previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. If no violations have occurred since the last submittal, this shall be stated.

[12] This map shall include all of the elevations obtained from monitoring wells located within a one-mile radius of the Facility boundary to which the Discharger has access. The contour intervals on the groundwater elevation map shall be small enough to show areas of groundwater mounding, if present.

clearly illustrate whether the Facility is operating in compliance with the WDRs. Where appropriate, the Discharger shall include supporting calculations (e.g., for averages or comparison of liquids removed to a specific reporting threshold).

h. Graphs depicting groundwater elevations through time, and TDS concentrations through time, at each monitoring point, with the concentrations being the y-axis and time being the x-axis. Logarithmic scales can be used for values that vary by order of magnitude. Individual graphs can combine multiple locations and/or multiple chemicals if it allows data to be compared more easily.

i. Piper (trilinear) diagrams of the major anions and cations, with sodium in the lower right portion of the cation triangle and chloride in the lower left portion of the anion triangle. The Discharger can include additional figures, tables, and graphs if it improves the readability of the document.

j. Field logs used during well purging and sampling. At a minimum, the field logs should include the following:

    i. The well number;

    ii. The sampling date and time;

    iii. The method of monitoring Field Monitoring Parameters and calibration of equipment used to monitor Field Monitoring Parameters;

    iv. The purge method (if a pump is used, include the depth of pump placement in each well and the pumping rate); and

    v. The purge and sample collection information such as: date each well was purged; well recovery time; method of disposal of the purged water; an estimate of the volume of water purged from each well; the results of all field analyses; depth to groundwater prior to purging, at the conclusion of purging, and when the sample was collected; the method of measuring the water level; and field personnel names and signature.

    vi. Documentation showing the calibration of flow meters and other sampling/monitoring equipment as performed in a timely manner.

vii. Copies of the laboratory data sheets for analyses within the semiannual monitoring period.

k. Repair Logs for any repairs to Mining Units or other onsite facilities occurring during the semiannual monitoring period.

l. A written summary of inspections by the Discharger, County of Imperial, BLM, and/or Regional Water Board and any related correspondence shall be included in an appropriate place in the Semi-Annual Monitoring Report. Copies of inspection reports prepared by the Discharger shall be included in an appendix to the report.

2. Annual Reporting

In addition to the components described in Section D.1, the Semiannual Monitoring Report due on February 15 (covering July 1 – Dec. 31) shall also include the results of all monitoring activities that are required to be reported annually, as well as the following:

a. An overall evaluation of the performance of the Facility, including a discussion of HLP capacity, nuisance conditions, and an update on any pilot projects.

b. **[Optional]** Any proposed changes to Monitoring Parameters or Constituents of Concern, monitoring points, monitoring frequencies or analytical methods.[13]

c. Annual updates to financial assurances cost estimates.

d. **[Every Five Years]** Revised Concentration Limits for all Monitoring Parameters and Constituents of Concern.

e. An annual summary consisting of the total volume of mining wastes generated at the Facility. The summary shall contain a table that lists each category of waste (e.g. Group B and C mining waste) and the volume accepted at the HLPs and “Group C” waste piles (i.e., Overburden Stockpiles).

[13] These changes may also be proposed in a separate technical report.

3. Data Presentation Requirements for Monitoring Reports

a. In reporting monitoring data, the Discharger shall arrange data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. Additionally, data shall be summarized in a manner that clearly illustrates compliance/noncompliance.

b. Unless reporting limits are specified in the same table, non-detections and sub-RL concentrations shall be reported as "< [limit]" (e.g., "< 5 µg/L").

c. Absent specific justification, all monitoring data shall be reported in the units specified herein.

d. All analytical data shall be reported with method detection limits (MDLs) and with either the reporting level or limits of quantitation (LOQs) according to 40 C.F.R. part 136, Appendix B. The laboratory reporting limit for all reported monitoring data shall be no greater than the practical quantitation limit (PQL).

e. Quality assurance / quality control (QA/QC) data shall be reported, along with the sample results to which they apply, including the method, equipment, and analytical detection limits, the recovery rates, an explanation of any recovery rate that is less than 80 percent, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analyses, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged, but the analytical results shall not be adjusted.

The Discharger shall implement the above monitoring program as of March 26, 2025.

Ordered by:

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Michael Placencia, Executive Officer

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Date

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