

STATE OF NEVADA
Department of Conservation and Natural Resources
Division of Environmental Protection
Bureau of Mining Regulation and Reclamation

Water Pollution Control Permit

Permittee: **Lithium Nevada Corp.
Thacker Pass Project
5310 Kietzke Lane, Suite 200
Reno, NV 89511**

Permit Number: **NEV2020104**
Review Type/Year/Revision: **New Permit 2022, Revision 00**

Pursuant to Nevada Revised Statutes (NRS) 445A.300 through 445A.730, inclusive, and regulations promulgated thereunder by the State Environmental Commission and implemented by the Division of Environmental Protection (the Division), this Permit authorizes the Permittee to construct, operate, and close the **Thacker Pass Project**, in accordance with the limitations, requirements, and other conditions set forth in this Permit. The Permittee is authorized to process up to **7,640,000 tons** of ore per year.

The facility is located in Humboldt County, within Sections 1 and 12, Township 44 North (T44N), Range 34 East (R34E); Sections 2-17, T44N, R35E; and sections 7, 8, 14-23, and 29, T44N, R36E, Mount Diablo Baseline and Meridian, approximately 20 miles northwest of the town of Orovada, Nevada.

The Permittee must comply with all terms and conditions of this Permit and all applicable statutes and regulations.

This Permit is based on the assumption that the information submitted in the application of 2 April 2020, as modified by subsequent approved amendments, is accurate and that the facility has been constructed and is being operated as specified in the application. The Permittee must inform the Division of any deviation from, or changes in, the information in the application, which may affect the ability of the Permittee to comply with applicable regulations or Permit conditions.

This Permit is effective as of **12 March 2022**, and shall remain in effect until **11 March 2027**, unless modified, suspended, or revoked.

Signed this 25TH day of **February 2022**.


Aimee Keys
Chief, Bureau of Mining Regulation and Reclamation

FOR A. KEYS
2/25/2022

I. Specific Facility Conditions and Limitations

A. In accordance with operating plans and facility design plans reviewed and approved by the Division the Permittee shall:

1. Construct, operate, and close the facility in accordance with those plans;
2. Contain within the fluid management system all process fluids including all meteoric waters which enter the system as a result of the 25-year, 24-hour storm event; and
3. Not release or discharge any process or non-process contaminants from the fluid management system.

B. Schedule of Compliance:

1. By 10 July 2022 (within 120 days of the effective date of the Permit), the Permittee shall submit for review and approval updated operating plans, pursuant to Nevada Administrative Code (NAC) 445A.398 and 445A.427, which are revised, as warranted, to reflect the requirements in this Permit and any associated as-built reports.
2. By 11 May 2022 (within 60 days of the effective date of the Permit), the Permittee shall submit the final location, design, and installation schedule for a groundwater monitoring well downgradient of the West Waste Rock Storage Facility (WWRSF). After Division approval, the well shall be installed, and at least three quarters of monitoring data collected, prior to commissioning the WWRSF component. Within 30 days after the well is completed, an as-built report shall be submitted pursuant to NAC 445A.427.
3. Thirty days prior to initiation of operations, the Permittee shall submit to the Division a written notice of intention to begin operation pursuant to Nevada Administrative Code (NAC) 445A.426
4. Thirty days prior to initiation of operations, the Permittee shall schedule a reasonable time for the Division to conduct a facility inspection to ascertain compliance of the constructed facility with the approved design and Permit.
5. Prior to the initiation of mining, the Permittee shall submit locations and designs for at least two piezometers to the Division for approval to verify water levels below the west pit. Prior to abandoning these initial piezometers to proceed mining east, the Permittee shall submit locations and designs for the installation of two additional piezometers for Division approval.
6. The subsurface conditions beneath the proposed sulfuric acid plant (SAP) shall be confirmed prior to construction. If the geotechnical program results in a modification to the design or location of the SAP, a permit modification and corresponding fee may be required for submittal and approval by the Division.
7. Prior to mining below the water table, the Permittee shall submit for Division review and approval, a major modification with the associated fee which proposes a mine plan and supporting groundwater model which demonstrates waters of the State will not be degraded.

8. By 10 July 2022 (within 120 days of the effective date of the Permit), the Permittee shall submit for review and approval an additional sensitivity analysis analyzing the effect of moisture content on seepage rates from the Clay Tailings Storage Facility to specify an allowable operating range for tailings placement.
9. By 11 May 2022 (within 60 days of the effective date of the Permit), the Permittee shall submit for review and approval an engineering design change for the installation of a surface flow measuring device or an updated monitoring plan which includes the methods to be used to monitor flow at the surface waters identified in Part I.D.9.

The schedule of compliance items above are not considered completed until approved in writing by the Division.

C. The fluid management system covered by this Permit consists of the following process components:

1. The clay tailings filter stack facility (CTFS) with solution collection pipes lined with 80-mil high density polyethylene (HDPE) geomembrane;
2. Leak detection system for the CTFS (CTFS perimeter piezometers) and south solution collection channel;
3. Double-lined Reclaim Pond with a leakage collection and recovery system;
4. Two waste rock storage facilities, coarse gangue stockpile, and run-of-mine stockpile each with a low hydraulic conductivity soil layer, and stormwater sediment and runoff ponds (EWRSF, WWRSF, CGS, and ROM Ponds) lined with 80-mil HDPE geomembrane;
5. Transfer pipes, valves, and pumps used in conveyance, control, or detection of process fluids between process components; and
6. Sulfuric acid plant and process plant, including, but not limited to, all tanks, basins, sumps, pumps, and piping necessary to interconnect the process components within the buildings.

D. Monitoring Requirements:

<u>Identification</u>	<u>Parameter</u>	<u>Frequency</u>
1. <u>Water Supply</u> QRPW-01, QRPW-02, PH-1	Profile I ⁽¹⁾ and Radionuclides ⁽²⁾	Annually, if used during the year
2. <u>West Pit:</u> PZ-1, PZ-2	Pit floor elevation, Presence of Water ⁽¹²⁾ and Profile I ⁽¹⁾ and Radionuclides ⁽²⁾ ; Water elevation (ft amsl)	Monthly, if present; Monthly

<u>Identification</u>	<u>Parameter</u>	<u>Frequency</u>
3. <u>Clay Tailings Filter Stack Leak Detection</u> LDP; LD-00, LD-01, LD-02, LD-03, LD-04, LD-05-06	Average daily flow (gpd); Presence of solution, if flow is present at LDP	Weekly (once commissioned)
4. <u>Reclaim Pond Leak Detection (sump capacity)</u> CTFS Reclaim Pond (RP-LD) (1,583 gal)	Average daily accumulation (gpd)	Weekly ⁽³⁾ (once commissioned)
5. <u>Piezometer Measurements</u> CTFS: <i>Structural Zone:</i> (PZ02, PZ03, PZ05, PZ06, PZ11, PZ12) <i>Non-Structural Zone:</i> (PZ01, PZ04, PZ07, PZ08, PZ09, PZ10) CTFS Perimeter (CTFS-01, CTFS-02, CTFS-03, CTFS-04, CTFS-05, CTFS-06, CTFS-07, CTFS-08)	Hydraulic head (feet)	Weekly
6. <u>Pond Solution</u> Reclaim Pond (RP) WWSF Pond (WP) EWSF Pond (EP) CGS Pond (CP) ROM Pond (ROMP)	Profile I ⁽¹⁾ and Radionuclides ⁽²⁾ , and flow (gpm)	Quarterly, if present (once commissioned)

<u>Identification</u>	<u>Parameter</u>	<u>Frequency</u>
7. <u>Mined Materials</u> Waste Rock (WR); Coarse Gangue (CG) Ore Stockpile (OS); Clay Tailings (CT) Sulfate Salts (SS)	MWMP ⁽⁴⁾ -Profile I ⁽¹⁾ and Radionuclides ⁽²⁾ and ANP/AGP ⁽⁵⁾⁽⁶⁾ , Tons placed in the CTFS MWMP ⁽⁴⁾ -Profile I ⁽¹⁾ and Radionuclides ⁽²⁾ and ANP/AGP ⁽⁵⁾⁽⁶⁾ ; MWMP ⁽⁴⁾ - Profile I ⁽¹⁾ and Radionuclides ⁽²⁾ , and ANP/AGP ⁽⁵⁾⁽⁶⁾ ; Physical stability, Geotechnical Moisture Content,percent compaction (ASTM D1557), and final placement location	Quarterly; Quarterly; Monthly
8. <u>Site Monitoring Wells</u> <i>Upgradient:</i> MW 18-04 <i>WWRSF:</i> MW 18-03, MW-02 <i>West Pit:</i> MW 18-01, WSH-11 <i>Quinn Valley:</i> WSH-13, WSH-14 <i>EWRSF:</i> MW-08 <i>CGS:</i> WSH-03 <i>CTFS:</i> MW 21-01, MW21-02, MW 18-02, MW 21-03	Profile I ⁽¹⁾ and Radionuclides ⁽²⁾ ; Water and collar elevation (feet AMSL)	Quarterly (once Commissioned); Each renewal

<u>Identification</u>	<u>Parameter</u>	<u>Frequency</u>
9. <u>Surface Water Monitoring</u> Upper Thacker Creek Lower Thacker Creek SP-02 (tributary to Crowley Creek) Crowley Creek upgradient of confluence: (CC-U) Crowley Creek downgradient of confluence: (CC-D)	Surface Water Profile ⁽⁹⁾ and Radionuclides ⁽²⁾ , flow (gpm)	Quarterly, when flowing
10. <u>Weather Station Facility</u> Ambient Conditions	Ambient temperature, (min/max), relative humidity (%), wind speed (mph), wind direction (azimuth degree), total precipitation (inches), solar irradiance (W/m ²), and SWE (inches)	Daily

The Permittee may request a reduction of the monitoring frequency after four quarters of complete monitoring based on justification other than cost. Such reductions may be considered modifications to the Permit and require payment of modification fees.

Abbreviations and Definitions:

AMSL = above mean sea level; ANP/AGP = Acid Neutralizing Potential:Acid Generation Potential ratio; ASTM = American Society for Testing and Materials; CaCO₃ = calcium carbonate; DO = dissolved oxygen; e = the base of the natural logarithm with approximate value of 2.718; Eh = chemical reduction potential; EPA = U.S. Environmental Protection Agency; gal = gallons; gpd = gallons per day; gpm = gallons per minute; ln = natural logarithm with base e; mg/L = milligrams per liter; mV = millivolts; MWMP = Meteoric Water Mobility Procedure; N = nitrogen; NAC = Nevada Administrative Code; NDEP = Nevada Division of Environmental Protection; NTU = nephelometric turbidity unit; P = phosphorous; pCi/L = picocuries per liter; PCS = Petroleum-Contaminated Soil; pH = the negative of the base 10 logarithm of the activity of the hydrogen ion; SU = standard units for pH measurement; SWE = snow water equivalent; TPH = total petroleum hydrocarbons; * = multiplication symbol; > = greater than; ≥ = greater than or equal

to; < = less than; °F = degrees Fahrenheit; µg/L = micrograms per liter; µS/cm = microSiemens per centimeter

Footnotes:

(1) Profile I:

Alkalinity (as CaCO ₃)	Cadmium	Magnesium	Silver
Bicarbonate	Calcium	Manganese	Sodium
Total	Chloride	Mercury	Sulfate
Aluminum	Chromium	Nitrate + Nitrite (as N)	Thallium
Antimony	Copper	Nitrogen, Total (as N)	Total Dissolved Solids
Arsenic	Fluoride	pH (± 0.1 SU) ⁽⁸⁾	Uranium, dissolved
Barium	Iron	Potassium	Zinc
Beryllium	Lead	Selenium	-

(2) Radionuclides include the following parameters:

Parameter	Reference Value
Gross Alpha*	15 pCi/L
Gross Beta	50 pCi/L
226Radium + 228Radium	5 pCi/L
Uranium, total	0.03 mg/L

*Report gross alpha and adjusted gross alpha in pCi/L.

Radiological analyses shall be performed on unfiltered samples for the total recoverable fraction. If the standard deviation (SD) of the gross alpha analysis is ≥ 15 pCi/L, the sample shall be re-analyzed for gross alpha using the co-precipitation method, EPA 00-02. If the following conditions are met, the sample shall also be analyzed for Th230 using Eichrome Method ACW10-11:

1. Electrical conductivity value $\geq 1,000$ µS/cm; and,
2. If the SD of the gross alpha analysis ≥ 15 pCi/L; or,
3. If the SD of Rd 226+228 is ≥ 5 pCi/L.

If Uranium is >0.03 mg/L in solution or is known or suspected to be $\geq 0.05\%$ in ore, the Permittee should contact the Nevada Department of Health and Human Services - Radiation Control Program to discuss characterization and associated Permitting or licensing requirements.

(3) The sump must be inspected and evacuated on a more frequent basis than weekly if the fluid level is above the top of the sump or the invert of any pipe which discharges into the sump, whichever level is lower, or if the potential exists to exceed the sump capacity. Records are required documenting

volume, date, and time of extraction to show that sumps are maintained in this condition.

- (4) The Meteoric Water Mobility Procedure (MWMP) shall be performed by a Nevada-approved laboratory, in accordance with ASTM Method E 2242-13 (or the most current method).
- (5) When static testing⁽⁶⁾ characterization of Mined Materials shows the potential for acid generation as set forth in the current version of the Division guidance document "Waste Rock, Overburden, and Ore Evaluation," the Permittee shall, as applicable, notify the Division in writing and initiate kinetic testing⁽⁷⁾ within 10 days.

If the kinetic test results indicate acid generation conditions exist, the Permittee shall submit in writing, within 30 days, the methods proposed for providing containment of these materials and the anticipated impact this acid generation potential may have on final stabilization of all components affected as defined in Nevada Administrative Code (NAC) 445A.359.

- (6) Acid Neutralizing Potential/Acid Generating Potential (ANP/AGP, also known as static testing or acid-base accounting) shall be performed by a Nevada-approved laboratory, using a LECO-type analysis, with full sulfur speciation, in accordance with the most current update of the Nevada Modified Sobek Procedure.
- (7) Kinetic testing (humidity cell testing) shall be performed by a Nevada-approved laboratory, in accordance with ASTM Method D 5744-18 Option 'A' (or the most current approved method); tests shall be run for a minimum of 20 weeks and for a longer duration if warranted or recommended by the analytical laboratory or required by the Division; samples shall be collected weekly (all weeks) and measurements shall be recorded for redox potential, pH, specific conductance ($\mu\text{S}/\text{cm}$), acidity and/or alkalinity (as deemed appropriate by the laboratory), sulfate, iron (total, plus ferric and ferrous speciation if total iron $> 0.6 \text{ mg/L}$ and $\text{pH} < 5 \text{ SU}$), and dissolved calcium and magnesium; weekly filtered extracts per the method will be digested and analyzed for total recoverable concentrations during week 0, 1, 2, 4, 8, 12, 16, and 20; 4-week extracts thereafter (i.e., week 24, 28, 32, etc.) shall be analyzed by a Nevada-certified analytical laboratory for Profile I⁽¹⁾ parameters, and specific conductance ($\mu\text{S}/\text{cm}$) and acidity and/or alkalinity shall be recorded as recommended by the analytical laboratory; final results reported shall include initial and final static test results⁽⁶⁾, a Profile I⁽¹⁾ analysis of the final leachate, all kinetic test results above, and any additional analyses required by the Division.
- (8) All sample analyses resulting in a pH value less than or equal to 5.0 SU shall also be analyzed for acidity (mg/L , as CaCO_3 equivalent).
- (9) Surface Water Profile – Black Rock Region: Quinn River, East and South Forks (e.g., Crowley Creek and Thacker Creek) (per NAC 445A.1236 and 445A.1312):

Alkalinity (as CaCO ₃)	Chromium (III), Dissolved ⁽¹⁰⁾	Nickel, Dissolved
Bicarbonate	Chromium (VI), Dissolved ⁽¹⁰⁾	Nitrate + Nitrite (as N)
Total	Copper, Dissolved	pH (± 0.1 SU) ⁽⁸⁾
Ammonia, Total (as N)	Cyanide, Free	Phosphorus, Total (as P)
Antimony, Total	Dissolved Oxygen	Potassium
Arsenic, Dissolved	Fluoride	Selenium, Total
Barium, Total	Hardness (as mg/L CaCO ₃) ⁽¹¹⁾	Silver, Dissolved
Beryllium, Total	Iron, Total	Sulfate
Boron, Total	Lead, Dissolved	Sulfide, Total (as un-dissociated hydrogen sulfide)
Cadmium, Dissolved	Magnesium	Thallium, Total
Calcium	Manganese, Total	Total Dissolved Solids
Chloride	Mercury, Dissolved	Zinc, Dissolved
Chromium, Total	Molybdenum, Total	-

(10) Analyze and calculate for chromium species only if total chromium exceeds 0.005 mg/L.

(11) Hardness = (2.497 * Ca) + (4.118 * Mg), where Ca is the calcium concentration in mg/L and Mg is the magnesium concentration in mg/L.

(12) For presence of water, state whether the pit surface is dry, damp, or wet. If water is ponding, provide a depth and flow measurement.

E. Quarterly and annual monitoring reports and release reporting shall be in accordance with Part II.B.

F. All sampling and analytical accuracy shall be in accordance with Part II.E.

G. Permit Limitations

1. The accumulation of more than 2 feet of sediment in any pond.
2. Mining below the 4,840 feet above mean sea level elevation, which is 15 feet above the pre-mining regional water table as outlined in the Piteau memo dated 28 April 2021 and titled *Thacker Pass Project Piezometric Hydrographs*. Water levels shall be confirmed with at least two additional piezometers installed 2 years in advance of mining into the following panel.
3. The daily accumulation or flow exceeding 150 gallons per day averaged over the quarter in the leak detection sump identified in Part I.D.4.
4. The daily accumulation or flow exceeding 50 gallons per day averaged over the year in the leak detection sump identified in Part I.D.4.

5. Failure to meet a Schedule of Compliance date or requirement.
6. The storage of solution in a single-lined pond for more than 20 consecutive days for any single event.
7. Except as otherwise allowed by this Permit, a minimum 2-foot freeboard shall be maintained in all ponds.
8. Tailings material may not be removed from the tailings impoundment, except with prior written authorization from the Division.
9. The Clay Tailings Filter Stack Facility, as measured vertically from the top of the synthetic liner for any point on the pad, constructed in excess of a maximum permitted elevation of 200 feet over 80-mil thickness HDPE geomembrane.
10. Ponding of solution on the CTFS.
11. The moisture content of the clay tailings material placed in the structural zone shall not exceed 46 percent until additional seepage analysis is submitted and approved by the Division in accordance with Part I.B.8
12. The moisture content of the clay tailings material placed in the non-structural zone shall not exceed 46 percent until additional seepage analysis is submitted and approved by the Division in accordance with Part I.B.8.
13. The facility shall not degrade waters of the State to the extent that applicable water quality standards or reference values, and background concentrations, are exceeded.
14. The following surface water quality standards apply to Quinn River, East and South Forks and its tributaries, including Crowley Creek and Thacker Creek, in accordance with NAC 445A.1236 and 445A.1312:

<u>Parameter</u>	<u>Standard or Standard Calculation Equation</u> ^(c) (µg/L, except as noted)
Alkalinity (as CaCO ₃)	≥ 20 mg/L
Ammonia, Total (as N)	mg/L per NAC 445A.118 ^(c)
Antimony, Total	146
Arsenic, Dissolved ^(a)	10
Barium, Total	2.0 mg/L
Beryllium, Total	0
Boron, Total	750
Cadmium, Dissolved ^{(a)(b)}	$(1.101672 - \{\ln(\text{hardness})(0.041838)\}) * e^{(0.7409\{\ln(\text{hardness})\} - 4.719)}$
Calcium	Measure and report (as mg/L calcium) for hardness determination
Chloride	400 mg/L
Chromium, Total	100

<u>Parameter</u>	<u>Standard or Standard Calculation Equation^(c)</u> (µg/L, except as noted)
Chromium (III), Dissolved ^{(a)(b)}	$(0.860) * e^{(0.8190 \{ \ln(\text{hardness}) \} + 0.6848)}$
Chromium (VI), Dissolved ^(a)	11
Copper, Dissolved ^{(a)(b)}	$(0.960) * e^{(0.8545 \{ \ln(\text{hardness}) \} - 1.702)}$
Cyanide, Free ^(a)	5.2
Dissolved Oxygen	≥ 6.0 mg/L
Fluoride	1.0 mg/L
Hardness ^(b)	Calculate and report (as mg/L CaCO ₃)
Iron, Total ^(a)	1.0 mg/L
Lead, Dissolved ^{(a)(b)}	$(1.46203 - \{ \ln(\text{hardness})(0.145712) \}) * e^{(1.273 \{ \ln(\text{hardness}) \} - 4.705)}$
Manganese, Total	200
Magnesium	Measure and report (as mg/L magnesium) for hardness determination
Mercury, Dissolved ^(a)	0.77
Molybdenum, Total ^(a)	1.65 mg/L
Nickel, Dissolved ^{(a)(b)}	$(0.997) * e^{(0.8460 \{ \ln(\text{hardness}) \} + 0.0584)}$
Nitrate + Nitrite (as N)	10 mg/L
pH	6.5 – 9.0 SU
Phosphorus, Total (as P)	100
Selenium, Total ^(a)	5.0
Silver, Dissolved ^{(a)(b)}	$(0.85) * e^{(1.72 \{ \ln(\text{hardness}) \} - 6.59)}$
Sulfate	500 mg/L
Sulfide, Total (as un-dissociated hydrogen sulfide) ^(a)	2.0
Thallium, Total	13
Total Dissolved Solids	500 mg/L
Zinc, Dissolved ^{(a)(b)}	$(0.986) * e^{(0.8473 \{ \ln(\text{hardness}) \} + 0.884)}$

- (a) The standard may be exceeded once every three years per NAC 445A.1236.
- (b) For calculated aquatic life standards, hardness (as mg/L CaCO₃) is determined via the equation in Part I.D., Footnote (11). See Part I.D. Abbreviations for reference. Include all calculated standards with each monitoring report, as applicable.

(c) For a complete list of applicable surface water standards, refer to NAC 445A.118, 445A.121, 445A.122, 445A.1236, and 445A.1312.

Exceedances of these limitations may be Permit violations and shall be reported as specified in Part II.B.4.

- H. The facility shall maintain automated or manual calibrated rain and snow gauge(s), which shall be monitored at least daily to record precipitation (inches of water, including snow water equivalent). A written and/or electronic record of precipitation data, and any other weather data required in Part I.D, shall be maintained on site and shall be submitted to the Division upon request, with each Permit renewal application, and pursuant to Parts II.B.1 and II.B.2, as applicable, in a Division-approved electronic format.
- I. The Permittee shall inspect all control devices, systems, and facilities weekly, and during (when possible) and after major storm events. These inspections are performed to detect evidence of:
 - 1. Deterioration, malfunction, or improper operation of control or monitoring systems;
 - 2. Sudden changes in the data from any monitoring device;
 - 3. The presence of liquids in leak detection systems; and
 - 4. Severe erosion or other signs of deterioration in dikes, diversions, closure covers, or other containment devices.
- J. Prior to initiating permanent closure activities at the facility, or at any process component or other source within the facility, the Permittee must have an approved final plan for permanent closure.
- K. The Permittee shall remit an annual review and services fee in accordance with NAC 445A.232 starting July 1 after the effective date of this Permit and every year thereafter until the Permit is terminated or the facility has received final closure certification from the Division.
- L. The Permittee shall not dispose of or treat Petroleum-Contaminated Soil (PCS) on the mine site without first obtaining from the Division approval of a PCS Management Plan.
- M. When performing dust suppression activities, the Permittee shall use best management practices and appropriate selection of water source and additives to prevent degradation of waters of the State. If a dust suppressant exceeds a water quality standard and the corresponding natural background water concentration in the area where dust suppression will occur, the Permittee shall demonstrate no potential to degrade waters of the State.
- N. Continuing Investigations:
 - 1. The Permittee shall submit to the Division for review and approval an updated waste rock management plan (WRMP) with each Permit renewal and with any application to modify the Permit that could affect the WRMP. A revised

WRMP must also be approved prior to initiating mining or in-pit backfill activities not previously approved. The WRMP must include representative characterization data for all anticipated waste rock and overburden in accordance with the current version of the Division guidance document "Waste Rock, Overburden, and Ore Evaluation," in addition to a detailed description of how, when, and where the materials will be managed and monitored, and appropriate controls to eliminate any potential to degrade waters of the State, if applicable. Approval may require modification of the Permit and payment of modification fees.

2. Revised stability analyses and interim as-built reports for the CTFS shall be submitted for Division review and approval on an annual basis.
3. The Permittee shall initiate and continue neutralization studies of tailings material prior to its filtration and stacking on the CTFS. Neutralization studies may include but are not limited to rinsing, chemical and/or physical alteration of the tailings material. The Permittee will submit annual progress reports to the Division for review and evaluation and will also include the potential short-term and long-term impacts of the neutralization methods on CTFS stability. Any neutralization methodology selected by the Permittee for implementation at the facility will require the submittal of detailed engineering designs and fee to modify the Permit.

II. General Facility Conditions and Limitations

A. General Requirements

1. The Permittee shall achieve compliance with the conditions, limitations, and requirements of the Permit upon commencement of each relevant activity. The Administrator may, upon the request of the Permittee and after public notice (if required), revise or modify a Schedule of Compliance in an issued Permit if he or she determines good and valid cause (such as an act of God, a labor strike, materials shortage, or other event over which Permittee has little or no control) exists for such revision.
2. The Permittee shall at all times maintain in good working order and operate as efficiently as possible, all devices, facilities, and systems installed or used by the Permittee to achieve compliance with the terms and conditions of this Permit.
3. Whenever the Permittee becomes aware that he or she failed to submit any relevant facts in the Permit application, or submitted incorrect information in a Permit application or in any report to the Administrator, the Permittee shall promptly submit such facts or correct information. Any inaccuracies found in this information may be grounds for revocation or modification of this Permit and appropriate enforcement action.

B. Reporting Requirements

1. The Permittee shall submit quarterly reports, in both hard copy and a Division-approved electronic format, which are due to the Division on or before the 28th day of the month following the quarter and must contain the following:
 - a. Monitoring results from the leak detection sumps, pipes, or piezometers identified in Parts I.D.3, I.D.4, and I.D.5, reported on Nevada Division of Environmental Protection (NDEP) Form 0590 or equivalent;
 - b. Presence of water in the west pit identified in Part I.D.2;
 - c. Analytical results of the solution collected from monitoring locations identified in Parts I.D.6, I.D.8, and I.D.9, reported on NDEP Form 0190 or equivalent;
 - d. Water and collar elevations for site monitoring wells and pit piezometers identified in Parts I.D.2, and I.D.8;
 - e. Analytical results of the MWMP-Profile I-R and ANP/AGP testing for the materials identified in Part I.D.7, reported on NDEP Form 0190 or equivalent;
 - f. The moisture content and compaction information identified in Part I.D.7;
 - g. A record of releases, and the remedial actions taken in accordance with the approved Emergency Response Plan on NDEP Form 0490 or equivalent; and
 - h. For any kinetic test initiated, continued, or terminated with Division approval during the quarter, provide a brief report of the test status and an evaluation of the results to date, which shall include all analytical data generated from the date testing was initiated through the reporting quarter.

Facilities which have not initiated mining or construction, must submit a quarterly report identifying the status of mining or construction. Subsequent to any noncompliance or any facility expansion which provides increased capacity, the Division may require an accelerated monitoring frequency.

2. The Permittee shall submit an annual report, in both hard copy and a Division-approved electronic format, by February 28th of each year, for the preceding calendar year, which contains the following:
 - a. Annual neutralization study progress report and interim as-built report for the CTFS, including but not limited to chimney drain placement, tailings moisture contents, compaction QA/QC, description of construction activities, as-built drawings, construction photos, field and laboratory testing, and a revised stability analysis incorporating data collected within the year;
 - b. Analytical results of water quality samples collected from water supply wells identified in Part I.D.1, reported on NDEP Form 0190 or equivalent;

- c. A synopsis of releases on NDEP Form 0390 or equivalent;
 - d. A brief summary of site operations, including the number of tons of ore processed during the year, construction and expansion activities, and major problems with the fluid management system;
 - e. A table of total monthly precipitation amounts and other weather data, as applicable, recorded in accordance with Parts I.D.10 and I.H, reported for either a five-year history previous to the date of submittal or the history since initial Permit issuance, whichever is shorter;
 - f. An updated version of the facility monitoring and sampling procedures and protocols, as applicable;
 - g. An updated evaluation of the closure plans, as applicable, using specific characterization data for each process component with respect to achieving stabilization; and
 - h. Graphs of leak detection flow rates, pH, total dissolved solids (TDS), sulfate, chloride, nitrate + nitrite (as N), fluoride, zinc, and arsenic concentrations (as applicable), versus time for all fluid sampling points. These graphs shall display either a five-year history previous to the date of submittal or the history since initial Permit issuance, whichever is shorter. Additional parameters may be required by the Division if deemed necessary.
3. Release Reporting Requirements: The following applies to facilities with an approved Emergency Response Plan. If a site does not have an approved Emergency Response Plan, then all releases must be reported as per NAC 445A.347 or NAC 445A.3473, as appropriate.
- a. A release of any quantity of hazardous substance, as defined at NAC 445A.3454, to surface water, or that threatens a vulnerable resource, as defined at NAC 445A.3459, must be reported to the Division as soon as practicable after knowledge of the release, and after the Permittee notifies any emergency response agencies, if required, and initiates any action required to prevent or abate any imminent danger to the environment or the health or safety of persons. An oral report shall be made by telephone to (888) 331-6337, and a written report shall be provided within 10 days in accordance with Part II.B.4.b.
 - b. A release of a hazardous substance in a quantity equal to or greater than that which is required to be reported to the National Response Center pursuant to 40 Code of Federal Regulations (CFR) Part 302 must be reported as required by NAC 445A.3473 and Part II.B.3.a.
 - c. A release of a non-petroleum hazardous substance not subject to Parts II.B.3.a. or II.B.3.b., released to soil or other surfaces of land, and the total quantity is equal to or exceeds 500 gallons or 4,000 pounds, or that is discovered in or on groundwater in any quantity, shall be reported to the Division no later than 5:00 P.M. of the first working day after knowledge

of the release. An oral report shall be made by telephone to (888) 331-6337, and a written report shall be provided within 10 days in accordance with Part II.B.4.b. Smaller releases, with total quantity greater than 25 gallons or 200 pounds and less than 500 gallons or 4,000 pounds, released to soil or other surfaces of land, or discovered in at least 3 cubic yards of soil, shall be reported quarterly on NDEP Form 0390 or equivalent.

- d. Petroleum Products and Coolants: If a release is subject to Parts II.B.3.a. or II.B.3.b., report as specified in Part II.B.3.a. Otherwise, if a release of any quantity is discovered on or in groundwater, or if the total quantity is equal to or greater than 100 gallons released to soil or other surfaces of land, report as specified in Part II.B.3.c. Smaller releases, with total quantity greater than 25 gallons but less than 100 gallons, released to soil or other surfaces of land, or if discovered in at least 3 cubic yards of soil, shall be reported quarterly on NDEP Form 0390 or equivalent.
4. The Permittee shall report to the Administrator any noncompliance with the Permit.
- a. Each such event shall be reported orally by telephone to (775) 687-9400, not later than 5:00 P.M. of the next regular work day from the time the Permittee has knowledge of the circumstances. This report shall include the following:
 - i. Name, address, and telephone number of the owner or operator;
 - ii. Name, address, and telephone number of the facility;
 - iii. Date, time, and type of incident, condition, or circumstance;
 - iv. If reportable hazardous substances were released, identify material and report total gallons and quantity of contaminant;
 - v. Human and animal mortality or injury;
 - vi. An assessment of actual or potential hazard to human health and the environment outside the facility; and
 - vii. If applicable, the estimated quantity of material that will be disposed and the disposal location.
 - b. A written summary shall be provided within 10 days of the time the Permittee makes the oral report. The written summary shall contain:
 - i. A description of the incident and its cause;
 - ii. The periods of the incident (including exact dates and times);
 - iii. If reportable hazardous substances were released, the steps taken and planned to complete, as soon as reasonably practicable, an assessment of the extent and magnitude of the contamination pursuant to NAC 445A.2269;

- iv. Whether the cause and its consequences have been corrected, and if not, the anticipated time each is expected to continue; and
 - v. The steps taken or planned to reduce, eliminate, and prevent recurrence of the event.
- c. The Permittee shall take all available and reasonable actions, including more frequent and enhanced monitoring to:
- i. Determine the effect and extent of each incident;
 - ii. Minimize any potential impact to the waters of the State arising from each incident;
 - iii. Minimize the effect of each incident upon domestic animals and all wildlife; and
 - iv. Minimize the endangerment of the public health and safety which arises from each incident.
- d. If required by the Division, the Permittee shall submit, as soon as reasonably practicable, a final written report summarizing any related actions, assessments, or evaluations not included in the report required in Part II.B.4.b., and including any other information necessary to determine and minimize the potential for degradation of waters of the State and the impact to human health and the environment. Submittal of the final report does not relieve the Permittee from any additional actions, assessments, or evaluations that may be required by the Division.

C. Administrative Requirements

1. A valid Permit must be maintained until permanent closure and post-closure monitoring are complete. Therefore, unless permanent closure and post-closure monitoring have been completed and termination of the Permit has been approved in writing by the Division, the Permittee shall apply for Permit renewal not later than 120 days before the Permit expires.
2. Except as required by NAC 445A.419 for a Permit transfer, the Permittee shall submit current Permit contact information described in paragraphs (a) through (c) of subsection 2 of NAC 445A.394 within 30 days after any change in previously submitted information.
3. All reports and other information requested by the Administrator shall be signed and certified as required by NAC 445A.231.
4. All reports required by this Permit, including, but not limited to, monitoring reports, corrective action reports, and as-built reports, as applicable, and all applications for Permit modifications and renewals, shall be submitted in both hard copy and a Division-approved electronic format.
5. The Permittee shall submit any new or updated Universal Transverse Mercator (UTM) location data for all monitoring points specified in Part I.D, expressed in meters and decimals of a meter, using the Nevada Coordinate System of 1983

(also known as the North American Datum of 1983 or NAD83, ref NRS 327.005), with each Permit renewal, as-built report, and monitoring plan update, as applicable. Data shall be submitted electronically to the Division in Excel format.

6. When ordered consistent with Nevada Statutes, the Permittee shall furnish any relevant information in order to determine whether cause exists for modifying, revoking and reissuing, or permanently revoking this Permit, or to determine compliance with this Permit.
7. The Permittee shall maintain a copy of, and all modifications to, the current Permit at the permitted facilities at all times.
8. The Permittee is required to retain during operation, closure, and post-closure monitoring, all records of monitoring activities and analytical results, including all original strip chart or data logger recordings for continuous monitoring instrumentation, and all calibration and maintenance records. This period of retention must be extended during the course of any unresolved litigation.
9. The provisions of this Permit are severable. If any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not thereby be affected.
10. The Permittee is authorized to manage fluids and solid wastes in accordance with the conditions of this Permit. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of Federal, State, or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under the Water Pollution Control Statutes for releases or discharges from facilities or units not regulated by this Permit. NRS 445A.675 provides that any person who violates a Permit condition is subject to administrative or judicial action provided in NRS 445A.690 through 445A.705.

D. Division Authority

The Permittee shall allow authorized representatives of the Division, at reasonable times, and upon the presentation of credentials to:

1. Enter the premises of the Permittee where a regulated activity is conducted or where records are kept per the conditions of this Permit;
2. Have access to and copy any record that must be kept per the conditions of this Permit;
3. Inspect and photograph any facilities, equipment (including monitoring and control equipment), practices, or operations regulated by this Permit; and
4. Sample or monitor for any substance or parameter at any location for the purposes of assuring Permit and regulatory compliance.

E. Sampling and Analysis Requirements

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. For each measurement or sample taken pursuant to the conditions of this Permit, the Permittee shall record the following information:
 - a. The exact place, date, and time of the inspection, observation, measurement, or sampling, and
 - b. The person(s) who inspected, observed, measured, or sampled.
3. Samples must be taken, preserved, and labeled according to Division approved methods.
4. Standard environmental monitoring chain of custody procedures must be followed.
5. Samples shall be analyzed by a laboratory certified or approved by the State of Nevada, as applicable for the method(s) being performed. The Permittee must identify in all required reports the certified and approved laboratories used to perform the analyses, laboratory reference numbers, and sample dates, and for the electronic version of each report only, include all associated laboratory analytical reports, including test results, test methods, chain-of-custody forms, and quality assurance/quality control documentation.
6. The accuracy of analytical results, unless otherwise specified, shall be expressed in mg/L and be reliable to at least two significant digits. The analytical methods used must have a practical quantitation limit (PQL) equal to or less than one-half the reference value for Profile I and Surface Water Profile parameters. Laboratories shall report the lowest reasonable PQL based on in-house method detection limit studies. Samples for Profile I parameters shall be filtered and analyzed for the dissolved fraction, unless otherwise required by the Division; samples for Surface Water Profile parameters shall be analyzed in accordance with NAC 445A.1236 and other applicable surface water regulations. Unless otherwise approved by the Division, analytical results that are less than the PQL shall be reported quantitatively by listing the PQL value preceded by the "<" symbol.

F. Permit Modification Requirements

1. Any material modification, as defined at NAC 445A.365, plan to construct a new process component, or proposed change to Permit requirements must be reported to the Division by submittal of an application for a Permit modification, or if such changes are in conformance with the existing Permit, by submittal of a written notice of the changes. The Permit modification application must comply with NAC 445A.391 through 445A.399, 445A.410, 445A.414, 445A.4155, 445A.416, 445A.417, 445A.440, and 445A.442, as applicable. The construction or modification shall not commence, nor shall a change to the Permit be effective, until written Division approval is obtained.

2. Prior to the commencement of mining activities at any site within the State which is owned or operated by the Permittee but not identified and characterized in a previously submitted application or report, the Permittee shall submit to the Division a report which identifies the locations of the proposed mine areas and waste disposal sites, and characterizes the potential of mined materials and areas to release pollutants. Prior to development of these areas the Division shall determine if any of these new sources will be classified as process components and require engineered containment as well as Permit modification.
3. The Permittee shall notify the Division in writing at least 30 days before the introduction of process solution into a new process component or into an existing process component that has been materially modified, or of the intent to commence active operation of that process component. Before introducing process solution or commencing active operation, the Permittee shall obtain written authorization from the Division.
4. The Permittee must obtain a written determination from the Administrator of any planned process component construction or material modification, or any proposed change to Permit requirements, as to whether it is considered a Permit modification, and if so, what type.
5. The Permittee must give advance notice to the Administrator of any planned changes or activities which are not material modifications in the permitted facility that may result in noncompliance with Permit requirements.

Prepared by: Michelle Griffin
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