

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

Water Pollution Control Permit

Permittee: **Marigold Mining Company
Marigold Mine
P.O. Box 160
Valmy, NV 89438**

Permit Number: **NEV0088040**
Review Type/Year/Revision: **Renewal/Major Modification 2024, Revision 0**

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 **Marigold Mine**, in accordance with the limitations, requirements and other conditions set forth in this Permit. The Permittee is authorized to process up to **40 million tons** of ore annually.

This facility is located in Humboldt County, within portions of Sections 1, 2, and 12, Township 32 North (T32N), Range 42 East (R42E); Sections 1, 11-13, 23-25, 35, and 36, T33N, R42E; Section 36, T34N, R42E; Sections 4-6, T32N, R43E; Sections 4-10, 16-21, and 28-33, T33N, R43E; Sections 19, 20, 28, and 30-33, T34N, R43E, Mount Diablo Baseline and Meridian (MDB&M), approximately 30 miles southeast (by air) of the city of Winnemucca, 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 8 December 1988, 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 **XX MONTH 2024** and shall remain in effect until **XX MONTH 2029**, unless modified, suspended, or revoked.

Signed this ____ day of **MONTH 2024**.

Rob Kuczynski, P.E.
Chief, Bureau of Mining Regulation and Reclamation

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. Any new process components or material modifications of existing process components shall be designed to contain all process fluids including all meteoric waters which enter the system as a result of the 500-year, 24-hour event; and
3. Not release or discharge any process or non-process contaminants from the fluid management system.

B. Schedule of Compliance:

1. Ninety days prior to mining within 50 feet of the groundwater table in the Mackay North and 5 North Pit (4,500 feet above mean sea level (amsl) and 4,490 feet amsl, respectively) submit a fate and transport model for review and approval by the Division.
2. By 1 June 2024, the Permittee shall provide an updated groundwater model and pit lake study, in accordance with Part I.N.1. The studies must use all available data from the Marigold Project monitoring wells and piezometers.

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. Heap Leach Pad Cells 1 through 22, 2/3 Infill, East Expansion, Cell 19B, Cell 24, Cell 23A, Cell 23B, and solution collection areas;
2. Double-lined Pregnant Ponds 1 through 6, Barren Ponds 1 and 2, and the single-lined Stormwater Overflow Pond;
3. Solution collection pipes and lined solution collection ditches;
4. Leak Detection, Collection, and Recovery Systems for Heap Leach Pad, solution collection areas, Pregnant Ponds 1 through 6, and Barren Ponds 1 and 2;
5. Transfer pipes, valves, and pumps used in conveyance, control or detection of process fluids between process components;
6. Process recovery facilities including, but not limited to, all tanks, basins, sumps, pumps, and piping and associated components; and
7. Marigold Tailings Impoundment (in closure).

D. Monitoring Requirements

<u>Identification</u>	<u>Parameter</u>	<u>Frequency</u>
1. <u>Production Wells:</u> WW1, WW2B, and WW3B	Profile I ⁽¹⁾ and Uranium ⁽⁴⁾	Annually
2. <u>Pond Leak Detection Sumps:</u> <i>(Approximate working sump volume: 1,200 gallons, each)</i> Pregnant Pond 1 (PPLDS1), Pregnant Pond 2 (PPLDS2), Pregnant Pond 3 (PPLDS3), Pregnant Pond 4 (PPLDS4), Pregnant Pond 5 (PPLDS5), Pregnant Pond 6 (PPLDS6), Barren Pond 1 (BPLDS1), and Barren Pond 2 (BPLDS2)	Average daily accumulation (gpd)	Quarterly average of weekly measurements ⁽⁷⁾
3. <u>Leach Pad Monitoring Points [monitoring wells]:</u> LDMP1, LDMP2, LDMP3, LDMP4, LDMP13, and LDMP14	Profile I ⁽¹⁾ , Uranium ⁽⁴⁾ , depth to groundwater (feet bgs), groundwater elevation (feet amsl), and collar elevation (feet amsl)	Quarterly
4. <u>Leach Pad Cell 7 Leak Detection Monitoring Port⁽²¹⁾:</u> LPLD7	Flow (gpd); Profile I ⁽¹⁾ and Uranium ⁽⁴⁾	Quarterly average of weekly measurements ⁽⁷⁾ ; Quarterly ⁽²¹⁾

Identification	Parameter	Frequency
<p>5. <u>Tailings Impoundment Monitoring Points [monitoring wells]⁽¹⁷⁾:</u></p> <p>TDOH1, TDOH4, TDOH12U, TDOH12L, TDOH13, TDOH14, TDOH15, TDOH16, TDOH17, TDOH18U, TDOH19U, TDOH20U, and TDOH20L;</p> <p>TDMP2R, TDOH2, TDOH3, TDOH5, TDOH18L, and TDOH19L;</p> <p>TDMP2R, TDOH2, TDOH3, and TDOH5;</p> <p>TDOH18L and TDOH19L</p>	<p>Depth to groundwater (feet bgs), groundwater elevation (feet amsl), and collar elevation (feet amsl);</p> <p>Profile I⁽¹⁾, Uranium⁽⁴⁾, depth to groundwater (feet bgs), groundwater elevation (feet amsl), and collar elevation (feet amsl);</p> <p>TDS, Chloride, WAD Cyanide, Barium, and Nitrate+Nitrite (as N);</p> <p>TDS, Chloride, WAD Cyanide, Barium, Arsenic, and Nitrate+Nitrite (as N)</p>	<p>Annually;</p> <p>Annually;</p> <p>Semi-annually (1st quarter and 3rd quarter);</p> <p>Quarterly</p>
<p>6. <u>Process Solutions:</u></p> <p>Pregnant Pond 1(PP1), Pregnant Pond 2 (PP2), Pregnant Pond 3 (PP3), Pregnant Pond 4 (PP4), Pregnant Pond 5 (PP5), Pregnant Pond 6 (PP6), Barren Pond 1 (BP1), and Barren Pond 2 (BP2)</p>	<p>Profile I⁽¹⁾ and Uranium⁽⁴⁾</p>	<p>Quarterly</p>
<p>7. <u>Tailings Reclaim Water:</u></p> <p>Tailings Reclaim Water (RW)</p>	<p>Profile I⁽¹⁾ and Uranium⁽⁴⁾</p>	<p>Annually</p>

<u>Identification</u>	<u>Parameter</u>	<u>Frequency</u>
<p>8. <u>Mined Materials:</u></p> <p>Mackay Pit, Mackay North Pit, (including the previously separate 8-Pit and Terry Zone Pit) and 5-North Pit, New Millennium Pit, Mud Pit and Valmy Pit;</p> <p>Leach Pad Ore</p>	<p>MWMP⁽⁸⁾-Profile I⁽¹⁾, Uranium⁽⁴⁾, and NMSP⁽⁹⁾⁽¹⁰⁾;</p> <p>NMSP⁽⁹⁾⁽¹⁰⁾</p>	<p>Quarterly (of composite samples)⁽²⁸⁾;</p> <p>Quarterly</p>
<p>9. <u>Single-Lined Overflow/Storm-water Pond 2:</u></p> <p>SW2</p>	<p>Number of days used</p>	<p>Quarterly (when used)</p>
<p>10. <u>Trout Creek Surface Water Monitoring⁽¹⁸⁾:</u></p> <p>TC-4, and TCD-OF</p>	<p>Profile I⁽¹⁾ and Uranium⁽⁴⁾</p>	<p>Quarterly (if flowing)</p>
<p>11. <u>Cottonwood Creek Surface Water Monitoring⁽¹⁹⁾:</u></p> <p>CC-1, and CC-2</p>	<p>Profile I⁽¹⁾ and Uranium⁽⁴⁾</p>	<p>Quarterly (if flowing)</p>
<p>12. <u>Groundwater Monitoring Points [monitoring wells]⁽²⁰⁾:</u></p> <p>MPS31-1 and MPS9-1;</p> <p>MPS31-1, MPS9-1, and RD19-2</p>	<p>Profile I⁽¹⁾ and Uranium⁽⁴⁾;</p> <p>Depth to groundwater (feet bgs), groundwater elevation (feet amsl), and collar elevation (feet amsl)</p>	<p>Quarterly;</p> <p>Quarterly</p>
<p>13. <u>Petroleum-Contaminated Soil (PCS) Screening Analysis:</u></p> <p>Each temporary holding pad and treatment cell, by PCS source type;</p> <p>Each approved on-site disposal location, by PCS source type</p>	<p>VOCs⁽¹²⁾, SVOCs⁽¹³⁾, TPH⁽¹⁴⁾;</p> <p>VOCs⁽¹²⁾, SVOCs⁽¹³⁾, TPH⁽¹⁴⁾</p>	<p>Quarterly, prior to removal⁽¹⁵⁾;</p> <p>Quarterly after provisional placement⁽¹⁵⁾</p>

Identification	Parameter	Frequency
<p>14. <u>PCS Hazardous Waste Determinations:</u></p> <p>Each PCS source</p>	Hazardous waste determination ⁽¹⁶⁾	When required ⁽¹⁶⁾
<p>15. <u>Overall PCS Management:</u></p> <p>Each temporary holding pad and disposal location by PCS source type</p>	PCS volume added (cu yds), volume removed (cu yds), destination, and total volume present (cu yds)	Quarterly
<p>16. <u>Pit Lake Monitoring</u></p> <p>Mackay, Mackay North, and 5 North Pits;</p> <p>General Monitoring – each pit lake;</p> <p>Water Column Monitoring⁽²³⁾ – each pit lake;</p> <p>Surface Samples⁽²⁵⁾ – each pit lake;</p> <p>Depth Samples⁽²⁶⁾ – each pit lake that is >25 feet deep or has an outflow to groundwater</p>	<p>Presence of Water⁽²²⁾;</p> <p>Photograph, lake surface elevation (ft amsl), maximum lake depth (ft), lake area (acres);</p> <p>Continuous field temperature (°F)⁽²⁴⁾ and specific conductance (µS/cm)⁽²⁴⁾ with depth (ft);</p> <p>Field pH (SU)⁽²⁴⁾, field Eh (mV)⁽²⁴⁾; (also consider adding DO (mg/L) if warranted)</p> <p>Profile III⁽²⁷⁾;</p> <p>Field pH (SU)⁽²⁴⁾, field Eh (mV)⁽²⁴⁾, depth below surface (ft); (also consider adding DO (mg/L) if warranted)</p> <p>Profile I⁽¹⁾, Uranium⁽⁴⁾, depth below surface (ft)</p>	<p>Quarterly;</p> <p>Monthly;</p> <p>Monthly;</p> <p>Monthly;</p> <p>Quarterly;</p> <p>Monthly;</p> <p>Quarterly</p>

Identification	Parameter	Frequency
17. <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)	Monthly Average of Daily Measurements

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; Eh = chemical reduction potential; EPA = U.S. Environmental Protection Agency; epilimnion = the uppermost layer in a stratified lake; gal = gallons; gpd = gallons per day; gpm = gallons per minute; hypolimnion = a lower layer in a thermally stratified lake below the metalimnion; metalimnion = a middle layer in a thermally stratified lake characterized by a temperature decrease with depth; mg/L = milligrams per liter; min/max = minimum and maximum; monimolimnion = the lower layer in a chemically stratified lake that does not mix with other layers; mph = miles per hour; mV = millivolts; MWMP = Meteoric Water Mobility Procedure; N = nitrogen; NAC = Nevada Administrative Code; NDEP = Nevada Division of Environmental Protection; Nevada Modified Sobek Procedure = NMSP; 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; stratified = a pit lake that has distinct chemical and/or temperature layers; SU = standard units for pH measurement; SVOCs = semi-volatile organic compounds; SWE = snow water equivalent; TPH = total petroleum hydrocarbons; VOCs = volatile organic compounds; WAD = weak acid dissociable; W/m² = watts per square meter; % = percent; * = 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:

General Chemistry Parameters		
Acidity ⁽²⁾	Chloride	pH (± 0.1 SU)
Alkalinity (as CaCO ₃) Bicarbonate ⁽³⁾ Total ⁽³⁾	Fluoride	Sulfate
	Nitrate + Nitrite (as N)	Total Dissolved Solids
	Nitrogen Total (as N)	WAD Cyanide
Metals Dissolved		
Aluminum	Chromium	Potassium
Antimony	Copper	Selenium
Arsenic	Iron	Silver
Barium	Lead	Sodium
Beryllium	Magnesium	Thallium
Cadmium	Manganese	Zinc
Calcium	Mercury	--

- (2) 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 CaCO₃ equivalent).
- (3) All sample analyses resulting in a pH value greater than or equal to 4.5 SU shall be analyzed for Alkalinity (Bicarbonate and Total).
- (4) Uranium (total) shall be reported in mg/L and have the reference value of 0.03 mg/L. If uranium (total) concentration is ≥ 0.030 mg/L, analysis for the Profile I⁽¹⁾, Uranium, and Profile R⁽⁵⁾ is required in the subsequent quarter.

(5) Profile R:

Parameter	Reference Value/Unit
Gross Alpha ⁽⁶⁾	pCi/L
Adjusted Gross Alpha*	15 pCi/L
226Radium	pCi/L
228Radium	pCi/L
226Radium + 228Radium	5 pCi/L

*Adjusted gross alpha is gross alpha minus uranium activity in pCi/L.

- (6) If the sample location is known to have a TDS greater than 1,000 mg/L, gross alpha must be analyzed using an appropriate method, e.g., EPA 00-02, EPA 900.0. Additionally, if the reported gross alpha activity is less than or equal to 15 pCi/L and the uncertainty of the adjusted gross alpha analysis is greater than or equal to 15 pCi/L is acceptable (e.g. 36 ± 21 pCi/L would be acceptable since the low range is at 15 pCi/L). Please utilize the appropriate method to minimize the uncertainty.

See Profile R analyte list on the Division's website for additional information.

- (7) The sumps 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 that document the volume, date, and time of extraction to show that sumps are maintained in this condition.
- (8) 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).
- (9) Nevada Modified Sobek Procedure (NMSP) shall be performed by a Nevada-approved laboratory, using a LECO-type analysis, in accordance with the most current update. of the Nevada Modified Sobek Procedure. The NMSP is a specific static test or acid-base accounting test.
- (10) When static testing⁽⁹⁾ characterization of Mined Materials falls within one of the scenarios requiring kinetic testing as set forth in the current version of the Division guidance document "Waste Rock, Overburden, and Ore Characterization and Evaluation," the Permittee shall notify the Division in writing within 10 days of receipt of the sample result, and either:
 - a. Initiate kinetic testing⁽¹¹⁾ or
 - b. request to waive kinetic testing for the individual samples. The request must be made in writing and must be approved in writing by the Division to be considered valid.
- (11) 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 (Eh), pH, specific conductance ($\mu\text{S}/\text{cm}$) preferably from a raw, non-filtered aliquot; acidity and/or alkalinity (as determined by the raw extract pH), sulfate, iron (total), plus ferric and ferrous speciation only if $\text{pH} < 5 \text{ SU}$), shall be analyzed following coarse filtration of the extract; and dissolved calcium and magnesium; Following coarse filtration of the extract, samples for Profile I metals shall be filtered, digested, and analyzed for the dissolved fraction; samples requiring Uranium⁽⁴⁾ and Profile III⁽²⁷⁾ analysis shall be unfiltered, digested (as applicable) and analyzed for total recoverable concentrations during weeks 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⁾, Uranium⁽⁴⁾, and Profile III⁽²⁷⁾ parameters, as applicable, and specific conductance ($\mu\text{S}/\text{cm}$) and acidity and/or alkalinity shall be recorded as required by the extract pH ; Final results reported shall include initial and final static test results⁽⁹⁾, a Profile I⁽¹⁾, Uranium⁽⁴⁾, and Profile III⁽²⁷⁾ analysis of the final leachate, all kinetic test results above, and any additional analyses required by the Division. The Division will not consider a request

to terminate an HCT until at least week 20. Under no circumstance will the HCT be placed on 'hold' pending Division review.

If the kinetic test results indicate acid generation conditions exist, the Permittee shall manage these materials in accordance with the Division-approved Waste Rock Management Plan, or if management of potentially acid generating material is not covered in the Waste Rock Management Plan 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.

- (12) Volatile Organic Compounds (VOCs) analyzed by a Nevada-certified laboratory using the most recent published version of EPA Method 8260.
- (13) Semi-Volatile Organic Compounds (SVOCs) analyzed by a Nevada-certified laboratory using the most recent published EPA Method 8270.
- (14) Total Petroleum Hydrocarbons (TPH) analyzed by a Nevada-certified laboratory using EPA Method 8015 Modified. If any gasoline-range petroleum is suspected, or if the source-type is unknown, both TPH-P (purgeable) and TPH-E (extractable) are required. Otherwise, only TPH-E is required.
- (15) Each segregated source type of PCS must be sampled separately pursuant to the approved sample collection protocol. For temporary holding pads and treatment cells, analyses are required only in quarters when PCS removal from the pad is anticipated. Removal to an on-site disposal location is authorized if PCS meets screening levels. For approved on-site disposal locations, analyses are required only in quarters when PCS has been provisionally placed subject to screening results.
- (16) A hazardous waste determination is required: a) Initially, for each PCS source prior to management under the PCS Management Plan; b) When a PCS waste stream is suspected to have changed character since the last determination; and c) When a hazardous constituent is detected during screening analyses at a concentration suggestive of hazardous waste. Determinations must be performed pursuant to 40 Code of Federal Regulations (CFR) 262.11 using operator knowledge and/or applicable analytical testing methods described in EPA publication SW-846. Operator knowledge must be adequately described and sufficient to justify the determination.
- (17) Tailings Impoundment Monitoring Point Notes: TDMP1, TDMP3, MMCPZ1 through MMCPZ6, TDOH6, and TDOH8 were plugged and abandoned pursuant to approved Tailings Facility Closure Plan. Tailings Interceptor Ditch Sumps TDIS1 and TDIS2 abandoned in accordance with Division-approved Tailings Facility Closure Plan.
- (18) Trout Creek Surface Water Monitoring Locations:
 - TC-4 WEDG-Marigold boundary line in Section 6; and
 - TCD-OF Point where Trout Creek Diversion overflow channel terminates within the southeast quarter of Section 25, Township 33 North, Range

42 East, MDB&M.

(19) Cottonwood Creek Surface Water Monitoring Locations

- CC-1 Valmy Project –in T33N, R43E, Section 7; and
- CC-2 Valmy Project –in Section T33N, R43E, Section 18.

(20) Groundwater Monitoring Locations:

- MPS31-1 Replaces MIL2001-1 and MIL2001-2 in previous Permits;
- MPS19-1 Replaces MIL2001-3 in previous Permits; and
- MPS9-1 Southeast corner of Section 9, Township 33 North, Range 43 East, MDB&M.
- RD19-2 Located in T33N, R43E, Section 19

(21) Cell 7 monitoring port LPLD 7 will be monitored weekly for flow rate and quarterly for Profile I constituents. Results will be reported quarterly. A separate report regarding the performance of the Cell 7 Remedial Action will be submitted quarterly.

(22) For presence of water, state whether the pit surface is dry, damp, or wet (ponded or flowing water). If ponded water has been present for at least one year, the Permittee shall perform the required monitoring for pit lakes.

(23) A continuous temperature-conductivity profile shall be completed for the entire water column at the deepest location in each pit lake.

(24) Field measurements (e.g., temperature, specific conductance, pH, Eh, etc.) shall be made at the Project site concurrent with the monitoring activity using a calibrated instrument, and do not require analysis by a laboratory certified or approved by the State of Nevada as otherwise specified in Part II.E.5. Field measurements must be accompanied by appropriate calibration information.

(25) The surface samples must be collected less than 10 feet below the surface of the pit lake.

(26) Depth sampling shall be performed at the deepest location in each pit lake. The number and depth of samples shall be determined based on the temperature-conductivity profile of the water column at the time of sampling. If the lake is stratified, collect a separate depth sample from each distinct layer in the water column (e.g., from the epilimnion, metalimnion, hypolimnion, and monimolimnion, as applicable; however, note that the quarterly sample from the surface layer [epilimnion] must be analyzed for Profile III constituents per the surface sample requirements whereas the quarterly depth samples from all other layers are analyzed for Profile I constituents). If the lake is unstratified and between 25 and 50 feet deep, collect one depth sample from the lower half of the water column. If the lake is unstratified and greater than 50 feet deep, collect two depth samples consisting of an intermediate sample from the middle third of the water column and a deep sample from the lower third of the water column. If the lake is less than 25 feet deep but includes an outflow to groundwater (i.e., it is a hydrologic flow-through pit lake),

collect a quarterly Profile I surface sample in addition to the quarterly Profile III surface sample.

(27) Profile III:

General Chemistry Parameters		
Acidity ⁽²⁾	Fluoride	Sulfate
Alkalinity (as CaCO ₃)	Nitrate + Nitrite (as N)	Total Dissolved Solids
Bicarbonate ⁽³⁾	Nitrogen, Total (as N)	Total Suspended Solids
Total ⁽³⁾	pH (± 0.1 SU)	--
Chloride	Phosphorus	--
Metals Totals		
Aluminum	Copper	Potassium
Antimony	Iron	Selenium
Arsenic	Lead	Sodium
Barium	Lithium	Strontium
Beryllium	Magnesium	Thallium
Boron	Manganese	Tin
Cadmium	Mercury	Uranium
Calcium	Molybdenum	Vanadium
Chromium	Nickel	Zinc

(28) The samples collected during each quarter will be composited by material type and pit.

- E. Quarterly and annual monitoring reports and spill 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 daily flow exceeding 75 gallons per day averaged over the quarter in the leak detection port identified in Part I.D.4.
 2. The daily flow exceeding 25 gallons per day averaged over the year in the leak detection port identified in Part I.D.4.
 3. The daily accumulation of flow exceeding 150 gallons per day averaged over the quarter in the leak detection sumps identified in Part I.D.2.
 4. The daily accumulation of flow exceeding 50 gallons per day averaged over the year in the leak detection sumps identified in Part I.D.2.

5. Failure to meet a Schedule of Compliance date or requirement.
6. All analytical samples shall be analyzed as mentioned in the Footnotes or Section II.E, as applicable.
7. Except as otherwise allowed by this Permit, a minimum 2-foot freeboard shall be maintained in all ponds.
8. Storage of process solution in any single-lined pond shall not exceed 20 days.
9. Active Heap Leach Cell Heights: Cell 8 shall not exceed a height of 100 feet above the HDPE liner surface. Cells 3, 4, 5a, 5b, 6, 2/3 infill, 9, 10, and the East Expansion shall not exceed a height of 350 feet above the high-density polyethylene (HDPE) liner surface. Cell 11 and 23B shall not exceed a height of 400 feet above the HDPE liner surface. Cells 12 through 23A and Cell 24 shall not exceed 500 feet above the HDPE liner surface. Cells 1, 2, 7, and 8 are inactive and cannot be utilized without Division approval.
10. The cumulative solution application rate to the heap leach pad shall not exceed the permitted 20,000 gallons per minute (gpm). Additionally, the solution application rate *per unit area* should not exceed 0.0035 gpm per square foot (gpm/ft²).
11. PCS that exceeds screening levels shall not be placed at an on-site disposal location.
12. 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.
13. The Cell 19/19B and Cell 24 leach pad gravity well system shall be operated in accordance with the Division-approved design to minimize the potential to create a phreatic surface within the heap material:
 - a. Gravity well boreholes shall be drilled to a depth not less than 50 feet above the liner surface;
 - b. Boreholes shall be placed no less than 80 feet apart;
 - c. Two adjacent gravity wells shall not receive solution simultaneously;
 - d. Solution shall not be applied to the surface of an area with active gravity wells;
 - e. Solution levels shall be monitored in all wells within 200 feet from an active gravity well. If the solution level rises in any of these nearby wells, the solution rate shall be reduced until the solution level drops again. If the solution level does not drop in a well that initially rose, application shall be terminated and may be moved to another well that did not exhibit a rise in solution level;
 - f. Gravity solution rates shall not exceed the permitted application rates for the heap;
 - g. Daily visual observation of the side slopes will be conducted. If solution seepage appears on the heap side slopes, solution injection shall be terminated and may be moved to another zone or well that did not exhibit a rise in solution level; and
 - h. The gravity well system shall be operated in a non-sequential progression to avoid creating and sustaining a phreatic surface in the heap. The operation shall not proceed in sequence from north to south, left to right, circular, or any other pattern that causes adjacent wells to be operated in succession to one another.

14. Mining in the New Millennium Pit will not be within 50 feet of the naturally occurring groundwater table (measured at 5029 feet above mean sea level). Mining will not occur below the groundwater table in the Valmy Pit (measured at 4940 feet above mean sea level) and Mud Pit (estimated using the pre-1992 inferred groundwater level at 4700 feet above mean sea level).

Exceedance 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, except the Marigold Tailings Impoundment which shall be inspected monthly 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 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 any process component or other source within the facility, the Permittee shall submit and obtain approval from the Division, in writing, of a 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 approved PCS Management Plan and the Division's Guidance for Mine-Site PCS Management Plans are hereby incorporated into this Permit by reference.
- 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 groundwater flow model and pit lake study with any application to renew or modify the Permit that could affect the pit lake predictive model. The submittal shall also

- include an ecological risk assessment if the predictive pit lake model indicates the potential for exceedance of a Division Profile III reference value, unless the constituent concentration for each predicted Profile III exceedance is no greater than the concentration evaluated in a previous Division-approved ecological risk assessment for the Project. These studies and assessments shall address, at a minimum, the requirements of NAC 445A.429, and shall include all available data, alternative pit lake or backfill scenarios, and mitigations to reduce ecological risk and the potential to degrade groundwater, as applicable. Approval may require modification of the Permit and payment of modification fees. If the Permittee determines that renewal of the Permit will not affect the groundwater flow model and pit lake study, in lieu of an updated model, the Permittee may submit to the Division for review and approval an evaluation and determination of the continued suitability and adequacy of the existing Division-approved groundwater flow model and pit lake study. The evaluation shall consider modeling methodology, current conditions, changes to site operations and physical conditions, and monitoring results since model approval. The determination shall compare modeled predictive vs. observed conditions whenever possible.
2. The Permittee shall submit to the Division for review and approval an updated waste rock management plan (WRMP) with any application to renew or 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. If the Permittee determines that renewal of the Permit will not affect the WRMP, in lieu of an updated WRMP, the Permittee may submit to the Division for review and approval an evaluation and determination of the continued suitability and adequacy of the existing Division-approved WRMP. The evaluation shall consider current conditions, changes to site operations and physical conditions, and monitoring results since WRMP approval.

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 the 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, or 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 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 identified in Part I.D.2 and reported on Nevada Division of Environmental Protection (NDEP) Form 0590 or equivalent;
 - b. Volumetric flow rate for the solution discharging from the monitoring port identified in Part I.D.4;
 - c. Analytical results of the solution collected from the monitoring locations identified in Parts I.D.3, I.D.4, I.D.5, I.D.6, I.D.7, I.D.10, I.D.11, and I.D.12 reported on NDEP Form 0190 or an equivalent;
 - d. Water and collar elevations for monitoring points (monitoring wells) identified in Parts I.D.3, I.D.5 (TDOH18L and TDOH19L only), and I.D.12;
 - e. Analytical results of the MWMP-Profile I and NMSP tests for the materials identified in Part I.D.8, reported on NDEP Form 0190 or equivalent;
 - f. Number of days used (if applicable) for the Stormwater Pond identified in Part I.D.9;
 - g. Analytical results from pit lakes identified in Part I.D.16, reported on NDEP Form 0290 and NDEP Form 0190 or equivalent, as applicable;
 - h. Other monitoring results for the pit lakes identified in Part I.D.16;
 - i. A record of releases, and the remedial actions taken in accordance with the approved Emergency Response Plan on NDEP Form 0490 or an equivalent;
 - j. A separate report regarding the performance of the Cell 7 Remedial Action activities and performance;
 - k. Analytical results, copies of hazardous waste determinations, and monitoring results, identified in Parts I.D.13 through I.D.15, pertaining to the approved PCS Management Plan;
 - l. An updated list of all PCS sources managed under the approved PCS Management Plan, with any new or changed sources highlighted, reported on NDEP Form PCS-01 or equivalent; current screening levels for each on-site disposal location; and a detailed explanation of any revisions to screening levels; and
 - m. For any kinetic test initiated, continued, or terminated with Division approval,

during the quarter in accordance with Part I.D.8, 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 a Division-approved electronic format, by February 28th of each year which contains the following:
 - a. Submit the following items to the Regulation Branch:
 - i. Analytical results of water quality samples collected from the production water supply wells identified in Part I.D.1 reported on NDEP Form 0190 or equivalent;
 - ii. Analytical results for water samples collected from the monitoring points (monitoring wells) identified in Part I.D.5 reported on NDEP Form 0190 or an equivalent;
 - iii. Analytical results for solutions collected from the monitoring points identified in Part I.D.7 reported on NDEP Form 0090 or an equivalent;
 - iv. Water and collar elevations for monitoring points (monitoring wells) identified in Part I.D.5;
 - v. For any kinetic test initiated, continued, or terminated with Division approval during the year, 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 year;
 - vi. A synopsis releases on NDEP Form 0390 or equivalent;
 - vii. A brief summary of site operations, including the number of tons of ore placed on heaps during the year, construction and expansion activities, and major problems with the fluid management system;
 - viii. A table of total monthly precipitation amounts and other weather data, as applicable, recorded in accordance with Parts I.D.17 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;
 - ix. An updated version of the facility monitoring and sampling procedures and protocols, as applicable;
 - x. Graphs of leak detection flow rates, pH, total dissolved solids (TDS), sulfate, chloride, nitrate + nitrite (as N), WAD cyanide, fluoride, zinc, and arsenic concentration (as applicable), versus time for all fluid sampling points. These graphs shall display either a five-year history previous to the date of submittal. Additional parameters may be required by the Division if deemed necessary.
 - b. Submit the following items to the Closure Branch:

- i. An updated Tentative Plan for Permanent Closure (TPPC) and Final Plan for Permanent Closure (FPPC), as applicable, incorporating any new site information that may impact these plans. The Plans shall be prepared in accordance with the current version of the Division guidance documents “Tentative Plans for Permanent Closure Guidance” and “Preparation Requirements & Guidelines Permanent Closure Plans & Final Closure Reports,” as applicable.
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 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. The release shall be reported through the online reporting system available at <https://www.ndep.nv.gov> or 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 three 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 three 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,

including any exceedances or deviations from Part I.G.

- 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, shall be submitted in 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 NAD 83, 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's Authority

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

1. Enter the Permittee's premises 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 Profile III parameters. Laboratories shall report the lowest reasonable PQL based on in-house method detection limit studies. Samples shall be analyzed by methods listed in 40 CFR Part 136 Table 1B, as applicable, by a laboratory certified for that method by the State of Nevada – Bureau of Safe Drinking Water Laboratory Certification Program. Samples for Profile I metals shall be filtered, digested, and analyzed for the dissolved fraction, all other Profile I parameters and samples requiring uranium analysis shall be unfiltered, digested (as applicable) and analyzed for the total recoverable fraction; samples for Profile III metals shall be unfiltered, digested, and analyzed for the total recoverable fraction, all other Profile III parameters analysis shall be unfiltered, digested (as applicable) and analyzed for the total recoverable fraction; samples requiring Uranium and Profile R analysis shall be unfiltered, digested (as applicable) and analyzed. For additional guidance, please see the Profile Analytical Lists on the website of the Division: <https://ndep.nv.gov/land/mining>. 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: Sara Jensen, P.E.

Date: 5 January 2024

Revision 00: 2024 Renewal/Major Modification, Boiler Plate updates, added T32N, R42E Section 12; Removed T34N, R43E Section 29, updated active pits, removed Trout Creek monitoring locations TC-2 and TC-3, added Cottonwood Creek monitoring locations CC-1 and CC-2, added requirement limiting mining to above the water table in New Millennium, Valmy and mud pits; effective.

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