Nevada Department of Conservation and Natural Resources • Division of Environmental Protection

BUREAU OF AIR POLLUTION CONTROL

901 South Stewart Street, Suite 4001 • Carson City, Nv 89701-5249
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Facility ID No. A0412 ***Permit No. AP1044-2242***

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: COEUR ROCHESTER, INC. (HEREINAFTER REFERRED TO AS PERMITTEE)
Mailing Address: P.O. BOX 1057, LOVELOCK, NEVADA 89419-1057
Physical Address: 26 MILES NORTHEAST OF LOVELOCK, NEVADA
General Driving Directions: FROM EXIT 119 (OREANA) ON INTERSTATE 80, TURN EAST AND DRIVE APPROXIMATELY 26 MILES ON LOVELOCK UNIONVILLE ROAD, FOLLOW PAVED SECTION TO FACILITY
General Facility Location: SECTIONS 2 – 3, 8 – 11, 15 – 17, 21 – 22, 27 – 29 AND 32 – 33; T 28N, R 34E, MDB&M
SECTIONS 4 AND 5; T 27N R 34E MDB&M
HA 101A – PACKARD VALLEY; HA 73 – LOVELOCK VALLEY; HA 129 – BUENA VISTA VALLEY
PERSHING COUNTY
NORTH 4,460.15 KM, EAST 402.15 KM, UTM (ZONE 11, NAD 83)

Emission Unit List		
A. System 01 – Refining Circuit (System 18 in Air Quality Operating Permit 1044-0063.05)		
TU	4.001	Reverberatory Furnace (S2.003 in Class II AQOP)
B. System 02 – Retort Oven Circuit (System 19 in Air Quality Operating Permit 1044-0063.05) (Revised October 2025, Air Case # 12559)		
TU	4.002	Mercury Retort 1 (S2.004 in Class II AQOP)
TU	4.003	Mercury Retort 2 (S2.005 in Class II AQOP)
C. System 03 – Mercury Retort 3 (System 19 in Air Quality Operating Permit 1044-0063.05) (Revised October 2025, Air Case # 12559)		
TU	4.004	Mercury Retort 3 (S2.077 in Class II AQOP)
D. System 04 – Mercury Retort 4 (System 19 in Air Quality Operating Permit 1044-0063.05) (Revised October 2025, Air Case # 12559)		
TU	4.005	Mercury Retort 4 (S2.078 in Class II AQOP)
E. System 05 – Mercury Retort 5 (System 19 in Air Quality Operating Permit 1044-0063.05) (Added October 2025, Air Case # 12559)		
TU	4.006	Mercury Retort 5 (S.2083 in Class II AQOP)

Facility ID No. A0412 Permit No. AP1044-2242
MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

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Section I. General Conditions

The Permittee must comply with, but is not limited to, all conditions of Nevada Administrative Code (NAC) 445B.3611-3689 *"Nevada Mercury Air Emissions Control Program"*, inclusive.

A. Records Retention. NAC 445B.3679.2(a) and NAC 445B.3685.2(b)
The Permittee of a Mercury Operating Permit to Construct shall retain records of all required monitoring data and support information for (5) years after the date of the sample collection, measurement, report or analysis. Supporting information includes, without limitation, all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.

B. Severability. NAC 445B.3679.2(b) NAC 445B.3685.2(c)
Each of the conditions and requirements of the Mercury Operating Permit to Construct is severable and, if any are held invalid, the remaining conditions and requirements continue in effect.

C. Compliance/Noncompliance. NAC 445B.3679.2(c) and NAC 445B.3685.2(d)
The Permittee must comply with all conditions of the Mercury Operating Permit to Construct. Any noncompliance constitutes a violation and is grounds for:
1. An action for noncompliance;
2. The revoking and reissuing, or the terminating of the Mercury Operating Permit to Construct by the Director; or
3. The reopening or revising of the Mercury Operating Permit to Construct by the holder of the Mercury Operating Permit to Construct as directed by the Director.

D. Defense to Noncompliance. NAC 445B.3679.2(d) and NAC 445B.3685.2(e)
The need to halt or reduce activity to maintain compliance with the conditions of the Mercury Operating Permit to Construct is not a defense to noncompliance with any conditions of the Mercury Operating Permit to Construct.

E. Cause. NAC 445B.3679.2(e) and NAC 445B.3685.2(f)
The Director may revise, revoke and reissue, reopen and revise, or terminate the Mercury Operating Permit to Construct for cause.

F. Property Rights/Exclusive Privilege. NAC 445B.3679.2(f) and NAC 445B.3685.2(g)
The Mercury Operating Permit to Construct does not convey any property rights or any exclusive privilege.

G. Information Request from Director. NAC 445B.3679.2(g) and NAC 445B.3685.2(h)
The Permittee shall provide the Director, in writing and within a reasonable time, with any information that the Director requests to determine whether cause exists for revoking or terminating the Mercury Operating Permit to Construct or to determine compliance with the conditions of this Mercury Operating Permit to Construct.

H. Right to Entry. NAC 445B.3679.2(h) and NAC 445B.3685.2(i)
The Permittee shall allow the Director or any authorized representative of the Director, upon the presentation of credentials, to:
1. Enter upon the premises of ***the Permittee*** where:
   a. The thermal unit that emits mercury is located;
   b. Activity related to mercury emissions is conducted; or
   c. Records are kept pursuant to the conditions of the Mercury Operating Permit to Construct.
2. Have access to and copy, during normal business hours, any records that are kept pursuant to the conditions of the Mercury Operating Permit to Construct;
3. Inspect, at reasonable times, any facilities, practices, operations, or equipment, including any equipment for monitoring or controlling air pollution, that are regulated or required pursuant to the Mercury Operating Permit to Construct; and
4. Sample or monitor, at reasonable times, substances or parameters to determine compliance with the conditions of the Mercury Operating Permit to Construct or applicable requirements.

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Section I. General Conditions (continued)

I. Certify True and Accurate. NAC 445B.3679.2(i) and NAC 445B.3685.2(j)
A responsible official of the stationary source shall certify that, based on information and belief formed after reasonable inquiry, the statements made in any document required to be submitted by any condition of the Mercury Operating Permit to Construct are true, accurate and complete.

J. Yearly Reporting. NAC 445B.3679.3(b, c, d) NAC 445B.3685.3(b)(c)(e)
The Permittee will submit yearly reports including, but not limited to, throughput, production, fuel consumption, hours of operation, emissions and mercury co-product. These reports and supporting documentation (if applicable) will be submitted via the State and Local Emissions Inventory System (SLEIS) maintained by the Bureau of Air Quality Planning for all emission units/systems specified. The completed report must be submitted to the Bureau of Air Quality Planning no later than March 1 annually for the preceding calendar year.
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K. Facilities Operation. NAC 445B.227
The Permittee may not:
1. Operate a stationary source of air pollution unless the control equipment for air pollution that is required by applicable requirements or conditions of the Mercury Operating Permit to Construct are installed and operating.
2. Disconnect, alter, modify or remove any of the control equipment for air pollution or modify any procedure required by an applicable requirement or condition of the Mercury Operating Permit to Construct.

L. Excess Emissions. NAC 445B.232
1. Scheduled maintenance or testing or scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive, must be approved by the Director and performed during a time designated by the Director as being favorable for atmospheric ventilation.
2. The Director must be notified in writing of the time and expected duration at least 24 hours in advance of any scheduled maintenance which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive.
3. The Director must be notified in writing or by telephone of the time and expected duration at least 24 hours in advance of any scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive.
4. The Director must be notified of any excess emissions within 24 hours after any malfunction or upset of the process equipment or equipment for controlling pollution or during startup or shutdown of such equipment. E-mail to: aircompliance@ndep.nv.gov
5. ***The Permittee***, as the owner or operator of an affected facility, shall provide the Director, within 15 days after any malfunction, upset, startup, shutdown, or human error which results in excess emissions, sufficient information to enable the Director to determine the seriousness of the excess emissions. The information must include at least the following:
   a. The identity of the stack or other point of emission, or both, where the excess emissions occurred.
   b. The estimated magnitude of the excess emissions expressed in units of the applicable limitation on emission and the operating data and methods used in estimating the magnitude of the excess emissions.
   c. The time and duration of the excess emissions.
   d. The identity of the equipment causing the excess emissions.
   e. If the excess emissions were the result of a malfunction, the steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunction.
   f. The steps taken to limit the excess emissions.
   g. Documentation that the equipment for controlling air pollution, process equipment, or processes were at all times maintained and operated, to a maximum extent practicable, in a manner consistent with good practice for minimizing emissions.

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Section I. General Conditions (continued)

M. Construction Requirements. NAC 445B.250
The Permittee shall provide the Director written notification of:
1. The date that construction or reconstruction of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply to mass-produced facilities which are purchased in completed form.
2. The anticipated date of initial startup of an affected facility, postmarked not more than 60 days and not less than 30 days prior to such date.
3. The actual date of initial startup of an affected facility, postmarked within 15 days after such date.

N. Testing and Sampling NAC 445B.252
1. To determine compliance with NAC 445B.001 to 445B.3689, inclusive, before the approval or the continuance of an operating permit or similar class of permits, the director may either conduct or order the owner of any stationary source to conduct or have conducted such testing and sampling as the director determines necessary. Testing and sampling or either of them must be conducted and the results submitted to the director within 60 days after achieving the maximum rate of production at which the affected facility will be operated, but not later than 180 days after initial startup of the facility and at such times as may be required by the director.
2. Tests of performance must be conducted and data reduced in accordance with the methods and procedures of the test contained in each applicable subsection of this section unless the director:
   a. Specifies or approves, in specific cases, the use of a method of reference with minor changes in methodology;
   b. Approves the use of an equivalent method;
   c. Approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific stationary source is in compliance; or
   d. Waives the requirement for tests of performance because the owner or operator of a stationary source has demonstrated by other means to the director's satisfaction that the affected facility is in compliance with the standard.
3. Tests of performance must be conducted under such conditions as the director specifies to the operator of the plant based on representative performance of the affected facility. The owner or operator shall make available to the director such records as may be necessary to determine the conditions of the performance test. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a performance test unless otherwise specified in the applicable standard.
4. ***The Permittee*** shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures.
5. Each test of performance must consist of at least three separate runs using the applicable method for that test. Each run must be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the runs apply. In the event of forced shutdown, failure of an irreplaceable portion of the sampling train, extreme meteorological conditions or other circumstances with less than three valid samples being obtained, compliance may be determined using the arithmetic mean of the results of the other two runs upon the director's approval.
6 All testing and sampling will be performed in accordance with recognized methods and as specified by the director.
7. The cost of all testing and sampling and the cost of all sampling holes, scaffolding, electric power and other pertinent allied facilities as may be required and specified in writing by the director must be provided and paid for by the owner of the stationary source.
8. All information and analytical results of testing and sampling must be certified as to their truth and accuracy and as to their compliance with all provisions of NAC 445B.001 to 445B.3689, inclusive, and copies of these results must be provided to the director no later than 60 days after the testing or sampling, or both.

O. SIP Article 2.5.4 *(Federally Enforceable SIP Requirement)*
1. Breakdown or upset, determined by the Director to be unavoidable and not the result of careless or marginal operations, shall not be considered a violation of these regulations.

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Section I. General Conditions (continued)

P. Expiration and Extension. NAC 445B.3687

1. If construction will occur in one phase, a mercury operating permit to construct for a new or modified thermal unit that emits mercury expires if construction is not commenced within 18 months after the date of issuance thereof or construction of the thermal unit that emits mercury is delayed for 18 months after initiated. The Director may extend the date on which the construction may be commenced upon a showing that the extension is justified.
2. If construction will occur in more than one phase, the projected date of the commencement of construction of each phase of construction must be approved by the Director. A mercury operating permit to construct expires if the initial phase of construction is not commenced within 18 months after the projected date of the commencement of construction approved by the Director. The Director may extend only the date on which the initial phase of construction may be commenced upon a showing that the extension is justified.

Q. Nevada Mercury Control Program Implementation Requirements NAC 445B.3679 and NAC 445B.3685

1. The NvMACT for **TU4.001 – TU4.006**, each must be implemented not later than 24 months after the issuance of this mercury operating permit to construct (NAC 445B.3679.3(a)(2)(I)).
   a. The issuance date for **TU4.002 – TU4.003** is **July 22, 2010**.
   b. The issuance date for **TU4.001** is **October 26, 2011**.
   c. The issuance date for **TU4.004** and **TU4.005** is **August 1, 2023**
   d. The issuance date for **TU4.006** is **October X, 2025.**
2. The Permittee shall provide the Director written notification of:
   a. The date of implementation of NvMACT for **TU4.001 – TU4.006** each, pursuant to NAC 445B.3679.3(a)(2)(i) postmarked within 15 days after such date (NAC 445B.3679.2(g)).
3. Construction on **Systems 05** must commence within 18 months after the issuance date of this permit. The NvMACT for **TU4.006** must be implemented upon startup.

R. Annual Reporting NAC 445B.3679 and NAC 445B.3685

The Permittee shall:

1. Report mercury co-product on an annual basis.
2. Report the level of mercury emissions on an annual basis which must be based on mercury emissions test data.

********** End of General Conditions **********

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Section II. Specific Operating Conditions

A. Emission Unit #TU4.001 Location North 4,460,446 m, East 403,034 km, UTM (Zone 11, NAD 83)

A. System 01 – Refining Circuit		
TU	4.001	Reverberatory Furnace (manufactured by U.S. Smelting Furnace Co., model (not specified), serial # REV 4000 LPG-24)

1. Air Pollution Equipment

a. Exhaust gases from **TU4.001** shall be ducted to a control system with 100% capture consisting of:
(1) **Wet Electrostatic Precipitator (WESP-01)**
(2) **Carbon Filter System** (**CF-001**)

b. Descriptive Stack Parameters
Stack: Height: 49.2 feet
Stack Diameter: 2.95 feet
Stack Temperature: approximately 151° F
Flow: Maximum volume flow rate of 9,600 dry standard cubic feet per minute (dscfm).

2 Operating Requirements (NAC 445B.3679.3)

a. Limitations of operation which affect mercury emissions.
(1) The maximum allowable throughput for **TU4.001** will not exceed **2.50** tons of charge materials per batch, nor more than **3,000** tons per year.
(2) Charge materials shall consist of:
(a) Merrill Crowe zinc precipitate that has been retorted in any of the retorts in **Systems 02 – 05**.
(b) Fluxing agents.
(c) Material collected from the wash-down of any equipment or surfaces contacted with precious metals that have been concentrated through the various concentration methods employed by precious metal mines.
(3) Mercury emissions from **System 01** shall not exceed **1.64 x 10^{-4}** grains per dry standard cubic foot (gr/dscf).
(4) Hours
TU4.001 may operate **24** hours per day.

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Section II. Specific Operating Conditions (continued)

A. Emission Unit #TU4.001 Location North 4,460,446 m, East 403,034 km, UTM (Zone 11, NAD 83)

2 Operating Requirements (NAC 445B.3679.3) (continued)

b. Work Practices

(1) The water flow rate for the pre-scrubber for **WESP-001** shall be maintained at or above **150** gallons per minute (gpm)
(2) The water flow rate for **WESP-001** shall be maintained in the system at or above **300** gallons per minute.
(3) The voltage for the **WESP-001** shall be maintained inside the normal operating range of **12 – 24** kilovolts.
(4) The pressure drop across **CF-001** shall be less than **4.0** inches water column.
(5) **CF-001** shall be equipped with **256** carbon filter trays, with each tray containing approximately **23** pounds of sulfur impregnated carbon. The total weight of sulfur impregnated carbon in **CF-001** shall be no less than **5,888** pounds.
(6) Replace all of the sulfur-impregnated carbon in **CF-001** according to the following schedule:
i. Conduct an initial sampling of a randomly chosen carbon filter tray from **CF-001** on the gas inlet side of the system **90** days after initial placement and each subsequent replacement of the carbon in the trays. The exact tray location of each sample will be recorded. Periodical sampling of the carbon filter trays on the gas inlet side of the system will be undertaken every year after the initial sampling, until the carbon reaches **50%** mercury loading. Quarterly sampling of the first stage in each module will then commence until the carbon reaches **90%** loading. The trays in **CF-001** will be replaced no later than **30** days after reaching **90%** loading to ensure the saturation limit of the carbon is not exceeded for **CF-001**.The required mercury analysis shall be performed utilizing one of the following methods:
1. EPA method 6020-Inductively Coupled Plasma-Mass Spectrometry;
2. EPA method 7471B- Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique); or
3. An alternative test method as approved in advance by the Director.
ii. On an annual basis, perform a total loading analysis on the mercury removal media in **CF-001**.
(7) Any sulfur-impregnated carbon replaced in **CF-001** shall be replaced with only the original manufacturer's design specification sulfur-impregnated carbon or with equivalent or better performing mercury removal media.
(8) The original manufacturer's design specifications for the sulfur-impregnated carbon used in **CF-001** shall be kept on site.

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3679.3)

a. Compliance Testing

(1) Within 180 days of initial startup of **TU4.001** and annually thereafter, the Permittee shall conduct and record a performance test for mercury on the exhaust stack of TU4.001 consisting of three valid runs utilizing US EPA Method 29 of 40 CFR Part 60 Appendix A. Each of the three test runs must collect a sample volume of **0.85** dry standard cubic meters (**30 dscf**) or be conducted for up to two hours in an effort to collect this sample volume.
(2) Simultaneously, during the Method 29 compliance test, conduct and record a material assay from **System 01**. One representative sample shall be taken for each test run. Total mercury content shall be determined using EPA Method 7471B (cold vapor atomic adsorption analysis) (or alternative test method approved by the Director).
(3) The Permittee shall comply with the requirements in Section I.N of this operating permit for all compliance testing

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Section II. Specific Operating Conditions (continued)

A. Emission Units #TU4.001 Location North 4,460,446 m, East 403,034 km, UTM (Zone 11, NAD 83)

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3679.3) (continued)

b. Monitoring

The ***Permittee***, upon the issuance date of this operating permit will:

(1) Prior to implementation of NvMACT for **TU4.001** install, operate, calibrate and maintain instrumentation to measure the following:
   (a) The differential pressure drop across **CF-001**, in inches water column.
(2) Monitor the batch weight of charge materials, in tons per batch, for **TU4.001** on a daily basis.
(3) Monitor the hours of operation for **TU4.001** on a daily basis.
(4) Monitor the water flow rate, in gallons per minute for the pre-scrubber for **WESP-001** once per batch when **TU4.001** is in operation.
(5) Monitor the water flow rate, in gallons per minute for the **WESP-001** once per batch when **TU4.001** is in operation.
(6) Monitor the voltage, in kilovolts for the **WESP-001** once per batch when **TU4.001** is in operation.
(7) Monitor the pressure drop, in inches water column across **CF-001** once per batch when **TU4.001** is in operation.

c. The required monitoring established in Section A.4.b. above will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:

(1) The calendar date of any required monitoring.
(2) The total daily batch weight of charge materials in tons per batch, for the corresponding date.
(3) The total daily hours of operation for the corresponding date.
(4) The measured value of the voltage for **WESP-001** while **TU4.001** is in operation, for the corresponding date.
(5) The measured value of the water flow rate for **WESP-001** while **TU4.001** is in operation, for the corresponding date.
(6) The measured value of the water flow rate to the pre-scrubber for **WESP-001** while **TU4.001** is in operation, for the corresponding date.
(7) The measured value for the pressure drop across **CF-001** while **TU4.001** is in operation, for the corresponding date.
(8) The percentage mercury loading by weight on the sulfur impregnated carbon sampled from the gas inlet side of the system from **CF-001**.
(9) The exact tray location that the sulfur impregnated carbon sample was taken for each module from **CF-001**.
(10) Carbon manufacturer specifications will be maintained on site for inspection.

d. Reporting

Permittee will promptly report to the Director any deviations from the requirements of the Operating Permit to Construct. The report to the Director will include probable cause of all deviations and any action taken to correct deviations. For this Operating Permit to Construct, prompt is defined as submittal of a report within 15 days of said deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under condition I.L. of this permit.

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Section II. Specific Operating Conditions (continued)

B. Emission Units #TU4.002 and TU4.003 Location North 4,460,443 m, East 403,020 m, UTM (Zone 11, NAD 83)

B. System 02 – Retort Oven Circuit (Revised October 2025, Air Case #12559)		
TU	4.002	Mercury Retort 1, manufacturer (Denver Mineral Engineers, Inc.), serial # 06102-1
TU	4.003	Mercury Retort 2, manufacturer (Denver Mineral Engineers, Inc.), serial # 06102-2

1. Air Pollution Equipment

a. Exhaust gases from **TU4.002 and TU4.003, each,** shall be ducted to a control system with 100% capture consisting of:
(1) **Mercury Condenser (CO-001)** equipped with a **Chiller (CH-001)**
(2) **Pre-Heater (PH-001)**
(3) **Demisters (DM-001 and DM-002)** (operating in parallel)
(4) **Carbon Canisters (CC-001, CC-002, CC-003, CC-004, CC-005))** *(manufactured by Yanke Machine Shop, Inc. and operating in series)*
(5) **Air Filter (AF-001)**

b. Descriptive Stack Parameters
Stack Height: 14 feet
Stack Diameter: 0.33 feet
Stack Temperature: approximately 90° F
Flow: Maximum volume flow rate of 85 dry standard cubic feet per minute (dscfm).

2. Operating Requirements (NAC 445B.3679.3)

a. Limitations of operation which affect mercury emissions
(1) The maximum allowable throughput for **TU4.002** and **TU4.003**, each, will not exceed **2.75** tons of precious metal bearing material per batch, nor more than **500** tons per year, each. Precious metal bearing material is defined by the following:
(a) Material loaded with precious metals such as gold and silver, along with various other metals that is produced by electrowinning, the Merrill-Crowe process, flotation and gravity separation processes, and other gold concentration or precipitation processes.
(b) Material collected from the wash-down of any equipment or surfaces contacted with precious metals that have been concentrated through the various concentration methods employed by precious metal mines.
(2) Mercury emissions from **TU4.002** and **TU4.003,** combined, shall not exceed **1.0×10^{-4}** grains per dry standard cubic foot (gr/dscf).
(3) Hours
(a) **TU4.002** and **TU4.003,** each may operate **24** hours per day.

b. Work Practices
(1) Retort (**TU4.002** and **TU4.003**)
(a) **TU4.002** and **TU4.003**, each, will be placed under vacuum during heating.
(b) The vacuum gauge pressure for **TU4.002** and **TU4.003**, each, shall be operated between **1.0 – 10.0** inches of water.
(c) Precious metal bearing material, only, shall be retorted in pans and not exceed the volume capacity specified by the manufacturer, per pan.
(d) **TU4.002** and **TU4.003**, each, shall be shut off if the vacuum is less than **1.0** inches of water or greater than **10.0** inches of water.

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Section II. Specific Operating Conditions (continued)

B. Emission Units #TU4.002 and TU4.003 Location North 4,460,443 m, East 403,020 m, UTM (Zone 11, NAD 83)

2. Operating Requirements (NAC 445B.3679.3) (continued)

b. Work Practices (continued)

(2) Mercury Condenser (**CO-001**)
- (a) **CO-001** shall be drained of mercury at the end of each batch run.
- (b) The water temperature at the inlet of **CO-001** shall be less than or equal to **92º F**.
- (c) The water flow rate for **CO-001** shall be between **12** and **25** gallons per minute (gpm).
- (d) **CH-001** shall be operated when the temperature at the inlet of **CO-001** is **70º F** or greater. **CH-001** shall be operated until the temperature at the inlet of **CO-001** is below **70º F**.
- (e) The exhaust gas temperature from **CO-001** shall be less than or equal to **90º F**.
- (f) **TU4.002** and **TU4.003** each shall be shut off if the exhaust gas temperature from **CO-001** exceeds **90ºF**.

(3) Sulfur Impregnated Carbon Adsorber Columns (**CC-001**, **CC-002, CC-003, CC-004, and CC-005**)
- (a) **CC-001**, **CC-002, CC-003, CC-004, and CC-005**, each, shall be equipped with approximately **225** pounds of sulfur impregnated carbon.
- (b) **CC-001**, **CC-002, CC-003, CC-004, and CC-005** will be operated in series.
- (c) Sample and replace the carbon in **CC-001**, **CC-002, CC-003, CC-004, and CC-005** according to the following schedule:
  Sample the carbon at the inlet and outlet of the carbon columns **CC-001**, **CC-002, CC-003, CC-004, and CC-005** and record the depth of the sample probe within **90** days after replacement of the carbon. The sampled carbon shall be analyzed for mercury and the average percentage of mercury, by weight, shall be calculated. The loading capacity of the sulfur-impregnated carbon is **20%** by weight. A sample of carbon shall be analyzed quarterly until **50%** of the carbon loading capacity is reached. Upon reaching **50%** of the carbon loading capacity, the sampling of carbon shall occur monthly until **90%** of the carbon loading capacity is reached. The carbon in carbon columns **CC-001**, **CC-002, CC-003, CC-004, and CC-005** shall be replaced no later than **30** days after reaching **90%** of the carbon loading capacity. The required mercury analysis shall be performed utilizing one of the following methods:
  - (i) EPA Method 6020 – Inductively Coupled Plasma-Mass Spectrometry;
  - (ii) EPA Method 7471B – Mercury in Solid of Semi-solid Waste (Manual Cold Vapor Technique); or
  - (iii) An alternative test method as approved by the Director.
- (d) Any sulfur-impregnated carbon replaced in **CC-001**, **CC-002, CC-003, CC-004, and CC-005** shall be replaced with only the original manufacturer's design specification sulfur-impregnated carbon or with equivalent or better performing mercury removal media.
- (e) The original manufacturer's design specifications for the sulfur-impregnated carbon used in **CC-001**, **CC-002, CC-003, CC-004, and CC-005** shall be kept on site.
- (f) **AF-001** shall be inspected annually, cleaning and replacement of internal components performed as necessary.

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

B. Emission Units #TU4.002 and TU4.003 Location North 4,460,443 m, East 403,020 m, UTM (Zone 11, NAD 83)

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3679.3)

a. Compliance Testing

(1) Within 180 days of initial startup of **TU4.002** and **TU4.003** and annually thereafter, the Permittee shall conduct and record a performance test for mercury on the exhaust stack of TU4.001 consisting of three valid runs utilizing US EPA Method 29 of 40 CFR Part 60 Appendix A. Each of the three test runs must collect a sample volume of **0.85** dry standard cubic meters (**30 dscf**) or be conducted for up to two hours in an effort to collect this sample volume.

(2) Simultaneously, during the Method 29 compliance test, conduct and record a material assay from **System 02**. One representative sample shall be taken for each test run. Total mercury content shall be determined using EPA Method 7471B (cold vapor atomic adsorption analysis) (or alternative test method approved by the Director).

(3) The Permittee shall comply with the requirements in Section I.N of this operating permit for all compliance testing

b. Monitoring

The ***Permittee***, upon the issuance date of this operating permit will:

(1) Install, operate, calibrate, and maintain a vacuum alarm system that will notify the 24/7 manned control room operator if the vacuum gauge pressure reaches **2.0** or **9.0** inches of water. Inspection of the alarm event and corrective action shall begin within 15 minutes of the alarm event.

(2) Install, operate, calibrate, and maintain an exhaust gas temperature alarm that will notify the 24/7 manned control room operator of the exhaust gas temperature from **CO-001** reaches **80ºF**. Inspection of the alarm event and corrective action shall begin within 15 minutes of the alarm event.

(3) Install, operate, calibrate and maintain an automatic switch that will activate **CH-001** when the temperature of the fresh water at the inlet of CO-001 reaches **70ºF**.

(4) Monitor the batch weight of precious metal bearing material for **TU4.002** and **TU4.003**, each.

(5) Monitor the hours of operation for **TU4.002** and **TU4.003**, each per batch.

(6) Monitor the vacuum gauge pressure for **TU4.002** and **TU4.003**, each twice per batch, at the beginning of the batch and again 24 hours after the start of the batch.

(7) Monitor the water temperature at the inlet of **CO-001** twice per batch when **TU4.002** and **TU4.003**, each are operating, at the beginning of the batch and again 24 hours after the start of the batch.

(8) Monitor the water flow for **CO-001** twice per batch when **TU4.002** and **TU4.003** each are operating, at the beginning of the batch and again 24 hours after the start of the batch.

(9) Monitor the exhaust gas temperature for **CO-001** twice per batch, when **TU4.002** and **TU4.003** each are operating, at the beginning of the batch and again 24 hours after the start of the batch.

(10) Monitor the percent mercury loading of the sulfur impregnated carbon in **CC-001**, **CC-002, CC-003, CC-004, and CC-005**, each, according to the schedule presented in Section B.2.(3).

(11) Monitor the date, time and corrective action performed prompted by any alarm as described in Section B.3.b.(1) and Section B.3.b.(2)

(12) Monitor the hours of operation for **CH-001**.

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Section II. Specific Operating Conditions (continued)

B. Emission Units #TU4.002 and TU4.003 Location North 4,460,443 m, East 403,020 m, UTM (Zone 11, NAD 83)

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3679.3)

c. Recordkeeping

The required monitoring established in Section B.3.b. above will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:

(1) The calendar date of any required monitoring.
(2) The total daily batch weight of precious metal bearing material, in tons, for the corresponding date.
(3) The total daily batch hours of operation per batch, for the corresponding date.
(4) The vacuum pressure of **TU4.002** and **TU4.003**, each, for the corresponding date.
(5) The water temperature of **CO-001** for the corresponding date.
(6) The water flow rate of **CO-001** for the corresponding date.
(7) The amount of sulfur impregnated carbon replaced in **CC-001, CC-002, CC-003, CC-004, and CC-005**, each, for the corresponding date.
(8) The percent of mercury loading for the sulfur impregnated carbon in **CC-001, CC-002, CC-003, CC-004, and CC-005**, each, for the corresponding date.
(9) The time and corrective action of any alarm event, for the corresponding date.
(10) The hours of operation of **CH-001**, for the corresponding date.
(11) The manufacturer of the sulfur impregnated carbon with specifications will be kept on site for inspection.
(12) The heat profile of **TU4.002** and **TU4.003** shall be kept on site for inspection.
(13) The results of the annual inspection of **AF-001**.

d. Reporting

(1) ***Permittee*** will promptly report to the Director any deviations from the requirements of the Operating Permit to Construct. The report to the Director will include probable cause of all deviations and any action taken to correct deviations. For this Operating Permit to Construct, prompt is defined as submittal of a report within 15 days of said deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under condition I.L. of this permit.
(2) ***Permittee*** will report annually to the Director the amount of mercury collected from the Mercury Condenser **(CO-001)**, in pounds for the reporting year.

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

C. Emission Unit #TU4.004 Location North 4,460,431 m, East 403,018 m, UTM (Zone 11, NAD 83)

C. System 03 – Mercury Retort 3 (Revised October 2025, Air Case #12559)		
TU	4.004	Mercury Retort 3, (manufactured by Lochhead, Model No. MR-40E)

1. Air Pollution Equipment

a. Exhaust gases from **TU4.004** shall be ducted to a control system with 100% capture consisting of:
(1) **Mercury Condensers (CO-002 and CO-003)** *(manufactured by Lochhead, operating in series)*
(2) **Collector Tank (TNK-01)** *(manufactured by Lochhead)*
(3) **Demister (DM-003)**
(4) **Air Filters (AF-002 and AF-003)** *(operating in series)*
(5) **Carbon Columns (CC-006, CC-007, and CC-008)** *(manufactured by Yanke Machine Shop, functionally arranged so that exactly two of the three carbon columns (CC-006, CC-007, and CC-008) are operating in series at all times; the third carbon column is redundant so that it is available for use in the event that one of the other carbon columns is non-operational)*
(6) **Air Filters (AF-004 and AF-005)** (*operating in series*)

b. Descriptive Stack Parameters
Stack Height: 24 feet
Stack Diameter: 0.33 feet
Stack Temperature: approximately 110° F
Flow: Approximate volume flow rate of 40 actual cubic feet per minute (acfm)

2. Operating Requirements (NAC 445B.3685.3)

a. Limitations of operation which affect mercury emissions
(1) The maximum allowable throughput for **TU4.004**, will not exceed **2.75** tons of precious metal bearing material per batch, nor more than **1,000** tons per year. Precious metal bearing material is defined by the following:
(a) Material loaded with precious metals such as gold and silver, along with various other metals that is produced by electrowinning, the Merrill-Crowe process, flotation and gravity separation processes, and other gold concentration or precipitation processes.
(b) Material collected from the wash-down of any equipment or surfaces contacted with precious metals that have been concentrated through the various concentration methods employed by precious metal mines.

(2) Mercury emissions from **TU4.004**, shall not exceed **1.0×10^{-4}** grains per dry standard cubic foot (gr/dscf).
(3) Hours
(a) **TU4.004** may operate **24** hours per day.

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

C. Emission Unit #TU4.004 Location North 4,460,431 m, East 403,018 m, UTM (Zone 11, NAD 83)

2. Operating Requirements (NAC 445B.3685.3) (continued)

b. Work practices

(1) Mercury Retort 3 (**TU4.004**)

(a) **TU4.004**, will be placed under vacuum during heating.

(b) The vacuum gauge pressure for **TU4.004** shall be operated equal to or greater than **1.0** inch of mercury.

(c) Precious metal bearing material, only, shall be retorted in pans and not exceed the volume capacity specified by the manufacturer, per pan.

(d) **TU4.004**, shall be shut off if the vacuum is less than **1.0** inch of mercury.

(2) Mercury Condensers (**CO-002 and CO-003)**

(a) **TNK-01** shall be drained of mercury at the end of each batch run.

(b) The water temperature at the inlet of **CO-003**, shall be less than or equal to **68º F**.

(c) The water flow rate to **CO-003**, shall be maintained at or above 15 gallons per minute (gpm).

(d) The exhaust gas temperature from **CO-003** shall be less than or equal to **140º F**.

(e) **TU4.004** shall be shut off if the exhaust gas temperature from **CO-003** exceeds **140ºF**.

(f) **AF-002 and AF-003** shall be inspected annually, cleaning and replacement of internal components performed as necessary.

(3) Carbon Columns (**CC-006, CC-007, and CC-008**)

(a) **CC-006, CC-007, and CC-008**, each, shall be equipped with approximately **225** pounds of sulfur impregnated carbon.

(b) **CC-006, CC-007, and CC-008** will be operated in series so that exactly two of the **CC-006, CC-007, and CC-008** carbon columns will be operational at all times; the third carbon column of the **CC-006, CC-007, and CC-008** carbon columns is redundant and is in place to operate if a carbon column is non-operational.

(c) Sample and replace the carbon in **CC-006**, **CC-007, and CC-008** according to the following schedule: Sample the carbon at the inlet and outlet of the carbon columns **CC-006**, **CC-007, and CC-008** and record the depth of the sample probe within **90** days after replacement of the carbon. The sampled carbon shall be analyzed for mercury and the average percentage of mercury, by weight, shall be calculated. The loading capacity of the sulfur-impregnated carbon is **20%** by weight. A sample of carbon shall be analyzed quarterly until **50%** of the carbon loading capacity is reached. Upon reaching **50%** of the carbon loading capacity, the sampling of carbon shall occur monthly until **90%** of the carbon loading capacity is reached. The carbon in carbon columns **CC-006**, **CC-007, and CC-008** shall be replaced no later than **30** days after reaching **90%** of the carbon loading capacity. The required mercury analysis shall be performed utilizing one of the following methods:

(i) EPA Method 6020 – Inductively Coupled Plasma-Mass Spectrometry;

(ii) EPA Method 7471B – Mercury in Solid of Semi-solid Waste (Manual Cold Vapor Technique); or

(iii) An alternative test method as approved by the Director.

(d) Any sulfur-impregnated carbon replaced in **CC-006, CC-007, and CC-008** shall be replaced with only the original manufacturer's design specification sulfur-impregnated carbon or with equivalent or better performing mercury removal media.

(e) The original manufacturer's design specifications for the sulfur-impregnated carbon used in **CC-006, CC-007, and CC-008** shall be kept on site.

(f) **AF-004 and AF-005** shall be inspected annually, cleaning and replacement of internal components performed as necessary.

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Section II. Specific Operating Conditions (continued)

C. Emission Unit #TU4.004 Location North 4,460,431 m, East 403,018 m, UTM (Zone 11, NAD 83)

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3685.3)

a. Compliance Testing

(1) Within 180 days of initial startup of **TU4.004** and annually thereafter, the Permittee shall conduct and record a performance test for mercury on the exhaust stack of TU4.001 consisting of three valid runs utilizing US EPA Method 29 of 40 CFR Part 60 Appendix A. Each of the three test runs must collect a sample volume of **0.85** dry standard cubic meters (**30 dscf**) or be conducted for up to two hours in an effort to collect this sample volume.

(2) Simultaneously, during the Method 29 compliance test, conduct and record a material assay from **System 03**. One representative sample shall be taken for each test run. Total mercury content shall be determined using EPA Method 7471B (cold vapor atomic adsorption analysis) (or alternative test method approved by the Director).

(3) The Permittee shall comply with the requirements in Section I.N of this operating permit for all compliance testing.

b. Monitoring

The ***Permittee***, upon the issuance date of this operating permit will:

(1) Install, operate, calibrate, and maintain a vacuum alarm system that will notify the 24/7 manned control room operator if the vacuum gauge pressure is below **1.0** inch of mercury. Inspection of the alarm event and corrective action shall begin within 15 minutes of the alarm event.

(2) Install, operate, calibrate, and maintain an exhaust gas temperature alarm that will notify the 24/7 manned control room operator of the exhaust gas temperature from **CO-003** reaches **130ºF**. Inspection of the alarm event and corrective action shall begin within 15 minutes of the alarm event.

(3) Monitor the batch weight of precious metal bearing material for **TU4.004**.

(4) Monitor the hours of operation for **TU4.004** per batch.

(5) Monitor the vacuum gauge pressure for **TU4.004**, twice per batch, at the beginning of the batch and again 24 hours after the start of the batch.

(6) Monitor the water temperature at the inlet of **CO-003** twice per batch when **TU4.004** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(7) Monitor the water flow to **CO-003** twice per batch when **TU4.004** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(8) Monitor the exhaust gas temperature for **CO-003** twice per batch, when **TU4.004** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(9) Monitor the percent mercury loading of the sulfur impregnated carbon in **CC-006, CC-007, and CC-008**, each according to the schedule presented in Section C.2.b.(3).

(10) Monitor the date, time and corrective action performed prompted by any alarm as described in Section C.3b.(1) and Section C.3.b.(2).

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

C. Emission Unit #TU4.004 Location North 4,460,431 m, East 403,018 m, UTM (Zone 11, NAD 83)

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3685.3)

c. Recordkeeping

The required monitoring established in Section C.3.b. above will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:

(1) The calendar date of any required monitoring.
(2) The total daily batch weight of precious metal bearing material in tons, for the corresponding date.
(3) The total daily batch hours of operation per batch, for the corresponding date.
(4) The vacuum pressure of **TU4.004**, for the corresponding date.
(5) The water temperature to **CO-003**, for the corresponding date.
(6) The water flow rate to **CO-003**, for the corresponding date.
(7) The amount of sulfur impregnated carbon replaced in **CC-006, CC-007, and CC-008**, each, for the corresponding date.
(8) The percent of mercury loading for the sulfur impregnated carbon in **CC-006, CC-007, and CC-008** each, for the corresponding date.
(9) The time and corrective action of any alarm event, for the corresponding date.
(10) The manufacturer of the sulfur impregnated carbon with specifications will be kept on site for inspection.
(11) The heat profile of **TU4.004** shall be kept on site for inspection.
(12) The exhaust gas temperature from **CO-003**, for the corresponding date.
(13) The results of the annual inspection of **AF-002, AF-003, AF-004, AF-005**.

d. Reporting

(1) ***Permittee*** will promptly report to the Director any deviations from the requirements of the Operating Permit to Construct. The report to the Director will include probable cause of all deviations and any action taken to correct deviations. For this Operating Permit to Construct, prompt is defined as submittal of a report within 15 days of said deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under condition I.L. of this permit.
(2) ***Permittee*** will report annually to the Director the amount of mercury collected from the Mercury Condensers **(CO-002 and CO-003)** and the Collector Tank **(TNK-01)**, in pounds for the reporting year.

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

D. Emission Unit #TU4.005 Location North 4,460,431 m, East 403,021 m, UTM (Zone 11, NAD 83)

D. System 04 – Mercury Retort 4 (Revised October 2025, Air Case #12559)		
TU	4.005	Mercury Retort 4, (manufactured by Lochhead, Model No. MR-40E)

1. Air Pollution Equipment

a. Exhaust gases from **TU4.005** shall be ducted to a control system with 100% capture consisting of:
(1) **Mercury Condensers (CO-004 and CO-005)** *(manufactured by Lochhead, operating in series)*
(2) **Collector Tank (TNK-02)** *(manufactured by Lochhead*)
(3) **Demister (DM-004)**
(4) **Air Filters (AF-006 and AF-007)** *(operating in series)*
(5) **Carbon Columns (CC-009, CC-010, and CC-011)** *(manufactured by Yanke Machine Shop, functionally arranged so that exactly two of the three carbon columns (CC-009, CC-010, and CC-011) are operating in series at all times; the third carbon column is redundant so that it is available for use in the event that one of the other carbon columns is non-operational)*
(6) **Air Filters (AF-008 and AF-009)** (*operating in series*)

b. Descriptive Stack Parameters
Stack Height: 24 feet
Stack Diameter: 0.33 feet
Stack Temperature: approximately 110° F
Flow: Approximate volume flow rate of 40 actual cubic feet per minute (acfm)

2. Operating Requirements (NAC 445B.3685.3)

a. Limitations of operation which affect mercury emissions
(1) The maximum allowable throughput for **TU4.005**, will not exceed **2.75** tons of precious metal bearing material per batch, nor more than **1,000** tons per year, each. Precious metal bearing material is defined by the following:
(a) Material loaded with precious metals such as gold and silver, along with various other metals that is produced by electrowinning, the Merrill-Crowe process, flotation and gravity separation processes, and other gold concentration or precipitation processes.
(b) Material collected from the wash-down of any equipment or surfaces contacted with precious metals that have been concentrated through the various concentration methods employed by precious metal mines.
(2) Mercury emissions from **TU4.005**, shall not exceed **1.0×10^{-4}** grains per dry standard cubic foot (gr/dscf).
(3) Hours
(a) **TU4.005** may operate **24** hours per day.

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Section II. Specific Operating Conditions (continued)

D. Emission Unit #TU4.005 Location North 4,460,431 m, East 403,021 m, UTM (Zone 11, NAD 83)

2. Operating Requirements (NAC 445B.3685.3) (continued)

b. Work practices

(1) Mercury Retort 4 (**TU4.005**)

(a) **TU4.005**, will be placed under vacuum during heating.
(b) The vacuum gauge pressure for **TU4.005**, shall be operated equal to or greater than 1.0 inch of mercury.
(c) Precious metal bearing material, only, shall be retorted in pans and not exceed the volume capacity specified by the manufacturer, per pan.
(d) **TU4.005**, shall be shut off if the vacuum is less than **1.0** inches mercury.

(2) Mercury Condensers (**CO-004 and CO-005**)

(a) **TNK-002** shall be drained of mercury at the end of each batch run.
(b) The water temperature at the inlet of **CO-005**, shall be less than or equal to **68º F**.
(c) The water flow rate to **CO-005**, shall be maintained at or above 15 gallons per minute (gpm).
(d) The exhaust gas temperature from **CO-005** shall be less than or equal to **140º F**.
(e) **TU4.005** shall be shut off if the exhaust gas temperature from **CO-005** exceeds **140ºF**.
(f) **AF-006 and AF-007** shall be inspected annually, cleaning and replacement of internal components performed as necessary.

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Section II. Specific Operating Conditions (continued)

D. Emission Unit #TU4.005 Location North 4,460,431 m, East 403,021 m, UTM (Zone 11, NAD 83)

2. Operating Requirements (NAC 445B.3685.3)

b. Work practices (continued)

(3) Carbon Columns (**CC-009, CC-010, and CC-011**)

(a) **CC-009, CC-010, and CC-011**, each, shall be equipped with approximately **225** pounds of sulfur impregnated carbon.

(b) **CC-009, CC-010, and CC-011** will be operated in series so that exactly two of the **CC-009, CC-010, and CC-011** carbon columns will be operational at all times; the third carbon column of the **CC-009, CC-010, and CC-011** carbon columns is redundant and is in place to operate if a carbon column is non-operational.

(c) Sample and replace the carbon in **CC-009**, **CC-010, and CC-011** according to the following schedule: Sample the carbon at the inlet and outlet of the carbon columns **CC-009**, **CC-010, and CC-011** and record the depth of the sample probe within **90** days after replacement of the carbon. The sampled carbon shall be analyzed for mercury and the average percentage of mercury, by weight, shall be calculated. The loading capacity of the sulfur-impregnated carbon is **20%** by weight. A sample of carbon shall be analyzed quarterly until **50%** of the carbon loading capacity is reached. Upon reaching **50%** of the carbon loading capacity, the sampling of carbon shall occur monthly until **90%** of the carbon loading capacity is reached. The carbon in carbon columns **CC-009**, **CC-010, and CC-011** shall be replaced no later than **30** days after reaching **90%** of the carbon loading capacity. The required mercury analysis shall be performed utilizing one of the following methods:

(i) EPA Method 6020 – Inductively Coupled Plasma-Mass Spectrometry;

(ii) EPA Method 7471B – Mercury in Solid of Semi-solid Waste (Manual Cold Vapor Technique); or

(iii) An alternative test method as approved by the Director.

(d) Any sulfur-impregnated carbon replaced in **CC-009, CC-010, and CC-011** shall be replaced with only the original manufacturer's design specification sulfur-impregnated carbon or with equivalent or better performing mercury removal media.

(e) The original manufacturer's design specifications for the sulfur-impregnated carbon used in **CC-009, CC-010, and CC-011** shall be kept on site.

(f) **AF-008 and AF-009** shall be inspected annually, cleaning and replacement of internal components performed as necessary.

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3685.3)

a. Compliance Testing

(1) Within 180 days of initial startup of **TU4.005** and annually thereafter, the Permittee shall conduct and record a performance test for mercury on the exhaust stack of TU4.001 consisting of three valid runs utilizing US EPA Method 29 of 40 CFR Part 60 Appendix A. Each of the three test runs must collect a sample volume of **0.85** dry standard cubic meters (**30 dscf**) or be conducted for up to two hours in an effort to collect this sample volume.

(2) Simultaneously, during the Method 29 compliance test, conduct and record a material assay from **System 04**. One representative sample shall be taken for each test run. Total mercury content shall be determined using EPA Method 7471B (cold vapor atomic adsorption analysis) (or alternative test method approved by the Director).

(3) The Permittee shall comply with the requirements in Section I.N of this operating permit for all compliance testing

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

D. Emission Unit #TU4.005 Location North 4,460,431 m, East 403,021 m, UTM (Zone 11, NAD 83) (continued)

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3685.3) (continued)

b. Monitoring

The ***Permittee***, upon the issuance date of this operating permit will:

(1) Install, operate, calibrate, and maintain a vacuum alarm system that will notify the 24/7 manned control room operator if the vacuum gauge pressure reaches **1.0** inch of mercury. Inspection of the alarm event and corrective action shall begin within 15 minutes of the alarm event.

(2) Install, operate, calibrate, and maintain an exhaust gas temperature alarm that will notify the 24/7 manned control room operator of the exhaust gas temperature from **CO-005** reaches **130ºF**. Inspection of the alarm event and corrective action shall begin within 15 minutes of the alarm event.

(3) Monitor the batch weight of precious metal bearing material for **TU4.005**.

(4) Monitor the hours of operation for **TU4.005** per batch.

(5) Monitor the vacuum gauge pressure for **TU4.005**, twice per batch, at the beginning of the batch and again 24 hours after the start of the batch.

(6) Monitor the water temperature at the inlet of **CO-005**, twice per batch when **TU4.005** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(7) Monitor the water flow for **CO-005**, twice per batch when **TU4.005** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(8) Monitor the exhaust gas temperature for **CO-005** twice per batch, when **TU4.005** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(9) Monitor the percent mercury loading of the sulfur impregnated carbon in **CC-009, CC-010, and CC-011**, each according to the schedule presented in Section D.2.b(3).

(10) Monitor the date, time and corrective action performed prompted by any alarm as described in Section D.3.b.(1) and Section D.3.b.(2).

c. Recordkeeping

The required monitoring established in Section D.3.b. above will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:

(1) The calendar date of any required monitoring.

(2) The total daily batch weight of precious metal bearing material, in tons, for the corresponding date.

(3) The total daily batch hours of operation per batch, for the corresponding date.

(4) The vacuum pressure of **TU4.005,** for the corresponding date.

(5) The water temperature to **CO-005**, for the corresponding date.

(6) The water flow rate to **CO-005**, for the corresponding date.

(7) The amount of sulfur impregnated carbon replaced in **CC-009, CC-010, and CC-011**, each for the corresponding date.

(8) The percent of mercury loading for the sulfur impregnated carbon in **CC-009, CC-010, and CC-011**, each, for the corresponding date.

(9) The time and corrective action of any alarm event, for the corresponding date.

(10) The manufacturer of the sulfur impregnated carbon with specifications will be kept on site for inspection.

(11) The heat profile of **TU4.005** shall be kept on site for inspection.

(12) The exhaust gas temperature from **CO-005**, for the corresponding date.

(13) The results of the annual inspection of **AF-006, AF-007, AF-008, and AF-009**.

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

D. Emission Unit #TU4.005 Location North 4,460,431 m, East 403,021 m, UTM (Zone 11, NAD 83)

d. Reporting

(1) ***Permittee*** will promptly report to the Director any deviations from the requirements of the Operating Permit to Construct. The report to the Director will include probable cause of all deviations and any action taken to correct deviations. For this Operating Permit to Construct, prompt is defined as submittal of a report within 15 days of said deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under condition I.L. of this permit.

(2) ***Permittee*** will report annually to the Director the amount of mercury collected from the Mercury Condensers **(CO-004 and CO-005)** and the Collector Tank **(TNK-02)**, in pounds for the reporting year.

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

E. Emission Unit #TU4.006 Location North 4,460,471 m, East 403,016 m, UTM (Zone 11, NAD 83)

E. System 05 – Mercury Retort 5 (Added October 2025, Air Case #12559)		
TU	4.006	Mercury Retort 5, (manufactured by Lochhead, Model No. MR-40E)

1. Air Pollution Equipment

a. Exhaust gases from **TU4.006** shall be ducted to a control system with 100% capture consisting of:
(1) **Mercury Condensers (CO-006 and CO-007)** *(manufactured by Lochhead, operating in series)*
(2) **Collector Tank (TNK-03)** *(manufactured by Lochhead*)
(3) **Demister (DM-005)**
(4) **Air Filters (AF-010 and AF-011)** *(operating in series)*
(5) **Carbon Columns (CC-012, CC-013, and CC-014)** *(manufactured by Yanke Machine Shop, functionally arranged so that exactly two of the three carbon columns (CC-012, CC-013, and CC-014) are operating in series at all times; the third carbon column is redundant so that it is available for use in the event that one of the other carbon columns is non-operational)*
(6) **Air Filters (AF-012 and AF-013)** (*operating in series*)

b. Descriptive Stack Parameters
Stack Height: 24 feet
Stack Diameter: 0.33 feet
Stack Temperature: approximately 110° F
Flow: Approximate volume flow rate of 40 actual cubic feet per minute (acfm)

2. Operating Requirements (NAC 445B.3685.3)

a. Limitations of operation which affect mercury emissions
(1) The maximum allowable throughput for **TU4.006**, will not exceed **2.75** tons of precious metal bearing material per batch, nor more than **1,000** tons per year, each. Precious metal bearing material is defined by the following:
(a) Material loaded with precious metals such as gold and silver, along with various other metals that is produced by electrowinning, the Merrill-Crowe process, flotation and gravity separation processes, and other gold concentration or precipitation processes.
(b) Material collected from the wash-down of any equipment or surfaces contacted with precious metals that have been concentrated through the various concentration methods employed by precious metal mines.
(2) Mercury emissions from **TU4.006**, shall not exceed **1.0 x 10^{-4}** grains per dry standard cubic foot (gr/dscf).
(3) Hours
(a) **TU4.006** may operate **24** hours per day.

b. Work practices
(1) Mercury Retort 5 (**TU4.006**)
(a) **TU4.006**, will be placed under vacuum during heating.
(b) The vacuum gauge pressure for **TU4.006**, shall be operated equal to or greater than 1.0 inch of mercury.
(c) Precious metal bearing material, only, shall be retorted in pans and not exceed the volume capacity specified by the manufacturer, per pan.
(d) **TU4.006**, shall be shut off if the vacuum is less than **1.0** inches mercury.

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

E. Emission Unit #TU4.006 Location North 4,460,471 m, East 403,016 m, UTM (Zone 11, NAD 83)

2. Operating Requirements (NAC 445B.3685.3)

b. Work practices (continued)

(2) Mercury Condensers (**CO-006 and CO-007**)
- (a) **TNK-003** shall be drained of mercury at the end of each batch run.
- (b) The water temperature at the inlet of **CO-007**, shall be less than or equal to **68º F**.
- (c) The water flow rate to **CO-007**, shall be maintained at or above 15 gallons per minute (gpm).
- (d) The exhaust gas temperature from **CO-007** shall be less than or equal to **140º F**.
- (e) **TU4.006** shall be shut off if the exhaust gas temperature from **CO-007** exceeds **140ºF**.
- (f) **AF-010 and AF-011** shall be inspected annually, cleaning and replacement of internal components performed as necessary.

(3) Carbon Columns (**CC-012, CC-013, and CC-014**)
- (a) **CC-012, CC-013, and CC-014**, each, shall be equipped with approximately **225** pounds of sulfur impregnated carbon.
- (b) **CC-012, CC-013, and CC-014** will be operated in series so that exactly two of the **CC-012, CC-013, and CC-014** carbon columns will be operational at all times; the third carbon column of the **CC-012, CC-013, and CC-014** carbon columns is redundant and is in place to operate if a carbon column is non-operational.
- (c) Sample and replace the carbon in **CC-012**, **CC-013, and CC-014** according to the following schedule: Sample the carbon at the inlet and outlet of the carbon columns **CC-012**, **CC-013, and CC-014** and record the depth of the sample probe within **90** days after replacement of the carbon. The sampled carbon shall be analyzed for mercury and the average percentage of mercury, by weight, shall be calculated. The loading capacity of the sulfur-impregnated carbon is **20%** by weight. A sample of carbon shall be analyzed quarterly until **50%** of the carbon loading capacity is reached. Upon reaching **50%** of the carbon loading capacity, the sampling of carbon shall occur monthly until **90%** of the carbon loading capacity is reached. The carbon in the carbon columns **CC-012**, **CC-013, and CC-014** shall be replaced no later than **30** days after reaching **90%** of the carbon loading capacity. The required mercury analysis shall be performed utilizing one of the following methods:
  - (i) EPA Method 6020 – Inductively Coupled Plasma-Mass Spectrometry;
  - (ii) EPA Method 7471B – Mercury in Solid of Semi-solid Waste (Manual Cold Vapor Technique); or
  - (iii) An alternative test method as approved by the Director.
- (d) Any sulfur-impregnated carbon replaced in **CC-012, CC-013, and CC-014** shall be replaced with only the original manufacturer's design specification sulfur-impregnated carbon or with equivalent or better performing mercury removal media.
- (e) The original manufacturer's design specifications for the sulfur-impregnated carbon used in **CC-012, CC-013, and CC-014** shall be kept on site.
- (f) **AF-012 and AF-013** shall be inspected annually, cleaning and replacement of internal components performed as necessary.

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

E. Emission Unit #TU4.006 Location North 4,460,471 m, East 403,016 m, UTM (Zone 11, NAD 83)

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3685.3)

a. Compliance Testing

(1) Within 180 days of initial startup of **TU4.006** and annually thereafter, the Permittee shall conduct and record a performance test for mercury on the exhaust stack of TU4.001 consisting of three valid runs utilizing US EPA Method 29 of 40 CFR Part 60 Appendix A. Each of the three test runs must collect a sample volume of **0.85** dry standard cubic meters (**30 dscf**) or be conducted for up to two hours in an effort to collect this sample volume.

(2) Simultaneously, during the Method 29 compliance test, conduct and record a material assay from **System 05**. One representative sample shall be taken for each test run. Total mercury content shall be determined using EPA Method 7471B (cold vapor atomic adsorption analysis) (or alternative test method approved by the Director).

(3) The Permittee shall comply with the requirements in Section I.N of this operating permit for all compliance testing

b. Monitoring

The ***Permittee***, upon the issuance date of this operating permit will:

(1) Install, operate, calibrate, and maintain a vacuum alarm system that will notify the 24/7 manned control room operator if the vacuum gauge pressure reaches **1.0** inch of mercury. Inspection of the alarm event and corrective action shall begin within 15 minutes of the alarm event.

(2) Install, operate, calibrate, and maintain an exhaust gas temperature alarm that will notify the 24/7 manned control room operator of the exhaust gas temperature from **CO-007** reaches **130ºF**. Inspection of the alarm event and corrective action shall begin within 15 minutes of the alarm event.

(3) Monitor the batch weight of precious metal bearing material for **TU4.006**.

(4) Monitor the hours of operation for **TU4.006** per batch.

(5) Monitor the vacuum gauge pressure for **TU4.006**, twice per batch, at the beginning of the batch and again 24 hours after the start of the batch.

(6) Monitor the water temperature at the inlet of **CO-007**, twice per batch when **TU4.006** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(7) Monitor the water flow for **CO-007**, twice per batch when **TU4.006** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(8) Monitor the exhaust gas temperature for **CO-007** twice per batch, when **TU4.006** is operating, at the beginning of the batch and again 24 hours after the start of the batch.

(9) Monitor the percent mercury loading of the sulfur impregnated carbon in **CC-012, CC-013, and CC-014**, each according to the schedule presented in Section E.2.b.(3).

(10) Monitor the date, time and corrective action performed prompted by any alarm as described in Section E.3.b.(1) and Section E.3.b.(2).

Issued to: Coeur Rochester, Inc.

Section II. Specific Operating Conditions (continued)

E. Emission Unit #TU4.006 Location North 4,460,471 m, East 403,016 m, UTM (Zone 11, NAD 83)

c. Recordkeeping

The required monitoring established in Section E.3.b. above will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:

(1) The calendar date of any required monitoring.
(2) The total daily batch weight of precious metal bearing material, in tons, for the corresponding date.
(3) The total daily batch hours of operation per batch, for the corresponding date.
(4) The vacuum pressure of **TU4.006,** for the corresponding date.
(5) The water temperature to **CO-007**, for the corresponding date.
(6) The water flow rate to **CO-007**, for the corresponding date.
(7) The amount of sulfur impregnated carbon replaced in **CC-012, CC-013, and CC-014**, each for the corresponding date.
(8) The percent of mercury loading for the sulfur impregnated carbon in **CC-012, CC-013, and CC-014**, each, for the corresponding date.
(9) The time and corrective action of any alarm event, for the corresponding date.
(10) The manufacturer of the sulfur impregnated carbon with specifications will be kept on site for inspection.
(11) The heat profile of **TU4.006** shall be kept on site for inspection.
(12) The exhaust gas temperature from **CO-007**, for the corresponding date.
(13) The results of the annual inspection of **AF-010, AF-011, AF-012, and AF-013**.

d. Reporting

(1) ***Permittee*** will promptly report to the Director any deviations from the requirements of the Operating Permit to Construct. The report to the Director will include probable cause of all deviations and any action taken to correct deviations. For this Operating Permit to Construct, prompt is defined as submittal of a report within 15 days of said deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under condition I.L. of this permit.
(2) ***Permittee*** will report annually to the Director the amount of mercury collected from the Mercury Condensers **(CO-006 and CO-007)** and the Collector Tank **(TNK-03)**, in pounds for the reporting year.

********** End of Specific Operating Conditions **********

Facility ID No. A0412 Permit No. AP1044-2242

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Coeur Rochester, Inc.

Section III. Amendments

4/2015 – Air Case 8245- Changed System 1 (furnace) emission limit from 1 x 10^{-5} gr/dscf to an interim emission limit of 5x10^{-3} gr/dscf with True-up/True-Down testing requirements. Also added stack parameters for System 1.

9/2016 – Air Case 9050 – Submitted letter finalizing True-up/True-down performance mercury emission limit for System 01

3/2017 – Air Case 9092 – Submitted MOPTC Revision finalizing True-up/True-down performance mercury emission limit for System 01

2/2023 – Air Case 11501 – Submitted MOPTC Revision which includes; revising throughputs for existing retorts from 7.5 tons combined to 2.75 tons each limited by 500 tons, from 67,500 tons combined per year, revises the reverberatory furnace hours by revising hourly limitations from 10 hours per day and 3,000 hours per year to 24 hour operation, limited by 3,000 tons annually, the addition of two new mercury retorts (Systems 03 and 04), updated MOPTC to current MOPTC standards and added appropriate regulatory citation in the General Conditions for New or Modified Thermal Units.

10/2025 – Air Case 12559 – Submitted MOPTC Revision which includes revisions to each of the retorts and adds an additional retort (Retort #5). The revisions to the current retorts are the following: for Retort #1 (TU4.002) and Retort #2 (TU4.003), replacing the current two carbon canisters with five new carbon canisters in series, adding an air filter before the final exhaust, adding pre-heaters before the retorts and before the demisters, and adding two demisters before the carbon canisters; for Retort #3 (TU4.004) and Retort #4 (TU4.005), replacing the two current carbon canisters with new carbon canisters in series and adding a third carbon canister for redundancy, adding a demister before existing air filters, and adding two additional air filters. The new retort (Retort #5) includes the same control systems as the revised Retort #4.

This permit:

1. **Is non-transferable. (NAC 445B.287.3)**
2. **Will be posted conspicuously at or near the stationary source. (NAC 445B.318.5)**
3. **Any party aggrieved by the Department's decision to issue this permit may appeal to the State Environmental Commission (SEC) within ten days after the date of notice of the Department's action. (NRS 445B.340)**

Signature _____

Issued by: Tanya Soleta, P.E.
Supervisor, Bureau of Air Pollution Control
Nevada Division of Environmental Protection

Phone: (775) 687-9540 Date: _____

Km	*ts*	*km*	*km*	*rc*
10/2011	*4/2015*	*5/2017*	*8/2023*	*10/2025*

Facility ID No. A0412 Permit No. AP1044-2242

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Coeur Rochester, Inc.

De Minimis Unit(s)

A. Pursuant to NAC 445B.3657 the Director has determined a De Minimis emission limit of 5.0 lbs/yr for each facility. In addition, the Director may designate thermal units as De Minimis on a case-by-case basis. The ***Permittee*** has provided the following thermal units with the potential to emit mercury as De Minimis and/or the following thermal units have been designated as De Minimis by the Director:

Unit #	Unit Description	Mercury PTE (lb/yr)
DM3.001	Grieve sample drying oven #1	**0.966**
DM3.002	Grieve sample drying oven #2	**0.966**
DM3.003	Grieve sample drying oven #3	**0.966**
DM3.004	Grieve sample drying oven #4	**1.45**
DM3.005	Assay Furnace #1	**0.00458**
DM3.006	Assay Furnace #2	**0.00458**
DM3.007	Assay Furnace #3	**0.00458**
DM3.008	Cupellation Furnace (Furnace #4)	**0.0000**
DM3.009	Wet Laboratory Thermo Scientific HPA224OMQ Hot Plate #1	**0.0478**
DM3.010	Wet Laboratory Lindbergh Model 53015 Hot Plate #2	**0.0478**
DM3.011	Fire Laboratory Thermo Scientific HPA224OMQ Hot Plate #3	**0.0000**
DM3.012	Fire Laboratory Thermo Scientific HPA224OMQ Hot Plate #4	**0.0000**
DM3.013	ELTRA CS800 Carbon-Sulfur Analyzer	**0.0000362**
DM3.014	Agilent AAA – 280FSAA (Au and Ag)	**0.0021**
DM3.015	Agilent AAA – 240FSAA (Hg)	**0.0119**
DM3.016	Agilent AAA – 240FSAA (Process)	**0.000201**
DM3.017	Thermo Scientific Atmosphere Controlled Ashing Furnace F30420C-60-80	**0.00000362**
DM3.018	Agilent AAA – 280FSAA (Limerick Process)	**0.000201**
DM3.019	Thermo Scientific iCAP PRO XPZ Duo ICP-OES (Au, Ag and Hg)	**0.00042**
	Total:	**4.47**

B. Annual Demonstration Requirement NAC 445B.3665(1)(b)

1. An owner or operator of a tier-3 thermal unit:
   (b) Shall submit documentation to the Director on an annual basis which certifies that the thermal unit satisfies the criteria to be a tier-3 thermal unit.

C. Amendments

1. June 17, 2021 – KM – Revised De Minimis Designation in accordance with facility request to add 4 thermal units, DM3.016 through DM3.019