



Bureau of Air Pollution Control

901 South Stewart Street, Suite 4001 • Carson City, NV 89701-5249
 phone: 775-687-9350 • www.ndep.nv.gov/bapc • fax: 775-687-6396

Facility ID No. A0004

Permit No. AP1041-2217

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE II

Issued to: VERIS GOLD USA, INC. (as Permittee)
Mailing Address: HC31, Box 78; Elko, NV 89801
General Facility Location: Jerritt Canyon Mine, Approximately 50 miles north of Elko, NV on State Route 225
County: Elko
Hydrographic Basin (HA): Portions of HA 36 (Independence Valley) and 44 (North Fork Area)
Section/Township/Range: T41N-R54E, Sec. 19, 20, 29, 30, 32, and 33 (MDB&M).
 T41N-R53E, Sec. 25, 26, and 35 (MDB&M).
 T40N-R54E, Sec. 5, 7, and 8 (MDB&M).
 T40N-R54E, Sec. 7, 8, 17, and 18 (MDB&M).
 T40N-R53E, Sec. 2, 11, 12, 14-16, 21, and 22 (MDB&M).
 T39N-R52E, Sec. 12, 13, 14, and 23 (MDB&M).
 T39N-R53E, Sec. 7 and 18 (MDB&M).
Facility UTM (NAD 83)
Coordinate (Zone 11): North 4,584,645 meters - East 591,556 meters (Bldg. 63)

Thermal Unit List:		
A. System 1 – Dry Mill Circuit: Ore Drying Process (System 35B in AQOP AP1041-3422)		
TU	4.001	Ore Dryer
B. System 2 – West Roaster Process (Systems 44A/45A in AQOP AP1041-3422)		
TU	4.002	West Roaster
TU	4.002A	West Quench Tank
C. System 3 – East Roaster Process (Systems 44B/45B in AQOP AP1041-3422)		
TU	4.003	East Roaster
TU	4.003A	East Quench Tank
D. System 4 – Electrowinning Cells and P/B Tanks (System 49 in AQOP AP1041-3422)		
TU	4.004	Electrowinning Cell I
TU	4.005	Electrowinning Cell II
TU	4.006	Pregnant Tank
TU	4.007	Barren Tank
E. System 5 – Refinery (System 50 in AQOP AP1041-3422)		
TU	4.008	Mercury Retort
TU	4.009	Smelt Furnace



BUREAU OF AIR POLLUTION CONTROL

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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

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)

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)

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)

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))

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))

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)

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)

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)

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.

Section I. General Conditions (continued)



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I. Certify True and Accurate NAC 445B.3679.2(i)

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)

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 will be submitted on the form provided by the Bureau of Air Pollution Control for all emission units/systems specified on the form. The completed form must be submitted to the Bureau of Air Pollution Control no later than March 1 annually for the preceding calendar year, unless otherwise approved by the Bureau of Air Pollution Control.

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 is 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: eenotify@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.

Section I. General Conditions (continued)



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M. Construction Requirements NAC 445B.250

1. The *Permittee* shall provide the Director written notification of:
 - a. 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.
 - b. 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.
 - c. 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. 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

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.

Section I. General Conditions (continued)



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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

1. The NvMACT for **Systems 1, 2, 3, 4 and 5** 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 **Systems 1, 2, 3, 4 and 5** is **XX/2015**.
2. The Permittee shall provide the Director written notification of:
 - a. The date of implementation of NvMACT for **Systems 1, 2, 3, 4, and 5**, each, pursuant to NAC 445B.3679.3(a)(2)(I) postmarked within 15 days after such date (NAC 445B.3679.2(g)).

R. Annual Reporting NAC 445B.3679

The Permittee shall:

1. Report mercury co-product on an annual basis (NAC 445B.3679.3(d)).
2. Report the level of mercury emissions on an annual basis, which must be based on mercury emissions test data (NAC 445B.3679.3(c)).

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



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Section II. Specific Operating Conditions

A. Thermal Unit TU4.001 Location North 4,584,932 m, East 591,635 m, UTM (Zone 11, NAD 83)

System 1 – Ore Dryer (System 35B in AQOP AP1041-3422)

TU 4.001	Ore Dryer (S2.022)
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1. Air Pollution Control Equipment

a. Exhaust gases from **TU4.001** shall be ducted to a control system with 100% capture consisting of:

- (1) Baghouse (**DC-030.1**)
- (2) Baghouse (**DC-030.2**)
- (3) Mercury Scrubber (**MS-005**)

b. **Descriptive Stack Parameters for Final Stack**

- (1) Height: **76.5** feet
- (2) Diameter: **8** feet
- (3) Temperature: approximately **143°F**
- (4) Exhaust gases from **TU4.001** shall have a maximum volume flow rate of approximately **75,000** dry standard cubic feet per minute (DSCFM).

2. Operating Requirements (NAC 445B.3679.3)

a. **Limitations of Operation**

- (1) The maximum allowable throughput rate of **ore** for **TU4.001** shall not exceed **350.0** tons per any one-hour period.
- (2) Mercury emissions from **TU4.001** shall not exceed **5.0 x 10⁻⁵** grains per dry standard cubic foot.
- (3) **TU4.001** may operate a total of **8,760** hours per calendar year.

b. **Work Practice Standards**

- (1) Baghouses (**DC-030.1** and **DC-030.2**)
 - (a) The differential pressure drop across **DC-030.1** and **DC-030.2**, each, shall be maintained between **0.5** and **10** inches of water
- (2) Mercury Scrubber (**MS-005**)
 - (a) The differential pressure across **MS-005** shall not exceed **8** inches water column.
 - (b) An alarm shall be activated if the differential pressure across **MS-005** is lower than **5** inches water column.
 - (c) An alarm shall be activated if vacuum is not present in the chlorine feed to **MS-005**.
 - (d) **MS-005** shall operate with a pH set point of **6.9**.
 - (e) A deviation alarm shall activate if the pH value deviates +/- **0.5** from the pH set point of **6.0**. A low alarm shall activate if the pH value of **MS-005** is less than **6.5**. A high alarm shall activate if the pH value of **MS-005** is than **7.5**.
 - (f) **MS-005** shall operate with an Oxygen Reduction Potential (ORP) set point of **825** millivolts.
 - (g) A deviation alarm shall activate if the ORP value of **MS-005** is less than **800** millivolts. A low alarm shall activate if the OPR value of **MS-005** is less than **750** millivolts.



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Section II. Specific Operating Conditions (continued)

A. Thermal Unit TU4.001 (continued)

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

a. Compliance Testing

- (1) Within 180 days of operating permit issuance for **System 1**, and annually thereafter, *the Permittee* shall conduct and record a performance test for mercury on the exhaust stack of **System 1** 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 1.7 dry standard cubic meters (60 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 1**. 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 issuance date of this operating permit, shall:

- (1) Monitor the daily throughput rate of **ore** for **TU4.001** in tons.
- (2) Monitor daily hours of operation for **TU4.001**.
- (3) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure across **MS-005** is lower than **5** inches water column.
- (4) Install, operate, calibrate, and maintain an alarm to notify operator if vacuum is not present in the chlorine line feed to **MS-005**.
- (5) Install, operate, calibrate, and maintain alarms to notify operator when pH for **MS-005** has +/- **0.5** deviation, is less than **6.0**, and is greater than **7.5** high.
- (6) Install, operate, calibrate, and maintain an alarm to notify operator if ORP falls below **750** millivolts for **MS-005**.
- (7) Monitor the differential pressure for **DC-030.1**, in inches water column, once per day.
- (8) Monitor the differential pressure for **DC-030.2**, in inches water column, once per day.
- (9) Monitor the vacuum in the chlorine feed to **MS-005**, continuously.
- (10) Monitor the differential pressure across **MS-005** continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (11) Monitor the pH of **MS-005**, continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (12) Monitor the ORP of **MS-005** continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

c. Recordkeeping

The required monitoring established in Section A.3.b above shall 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 throughput of **ore** in tons for **TU 4.001** for the corresponding date.
- (3) The total daily hours of operation for **TU4.001** for the corresponding date.
- (4) The average hourly throughput rate in tons per hour for **TU 4.001**. The average hourly throughput rate will be determined from the total daily throughput (2) and the total daily hours of operation (3) above.
- (5) The differential pressure across **MS-005**, based on one-hour periods, for the corresponding date.
- (6) The pH of **MS-005**, based on one-hour periods, for the corresponding date.
- (7) The ORP of **MS-005**, based on one-hour periods, for the corresponding date.
- (8) The differential pressure for **DC-030.1**, once per day, for the corresponding date.
- (9) The differential pressure for **DC-030.2**, once per day, for the corresponding date.
- (10) The date, time and corrective action for any alarm event in **System 1**.



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Section II. Specific Operating Conditions (continued)

A. Thermal Unit TU4.001 (continued)

3. Testing, Monitoring, Recordkeeping and Reporting (continued)

d. **Reporting**

- (1) *The Permittee* will promptly report to the Director any emissions and or throughput exceedances from **System 1**. The report to the Director will include probable cause and any action taken to correct the exceedence. 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 operating permit.

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Section II. Specific Operating Conditions (continued)

B. Thermal Units TU4.002 and TU4.002A Location North 4,584,932 m, East 591,635 m, UTM (Zone 11, NAD 83)

System 2 – West Roaster Process (Systems 44A/45A in AQOP AP1041-3422)		
TU	4.002	West Roaster (S2.031) Manufactured by Keeler/Dorr Oliver
TU	4.002A	West Quench Tank

1. Air Pollution Control Equipment

- a. Exhaust gases from **TU4.002 and TU4.002A** shall be ducted to a control system with 100% capture consisting of:
 - (1) Cyclone (**CY-001**)
 - (2) Gas Quench Tower (**GQ-001**)
 - (3) Entoleter (**EN-001**)
 - (4) SO₂ Scrubber (**SS-001**)
 - (5) Mercury Scrubber #1 (**MS-001**)
 - (6) Mercury Scrubber #2 (**MS-003**)
 - (7) Tails Gas Scrubber (**TS-001**)
- b. **Descriptive Stack Parameters for Final Stack**
 - (1) Height: **180** feet
 - (2) Diameter: **3.0** feet
 - (3) Temperature: approximately **125**°F
 - (4) Exhaust gases from **TU4.002 and TU4.002A** shall have a maximum volume flow rate of approximately **6,600** dry standard cubic feet per minute (DSCFM).
 - (5) **TU4.002 and TU4.002A** share a single exhaust stack.

2. Operating Requirements (NAC 445B.3679.3)

- a. **Limitations of Operation**
 - (1) The maximum allowable throughput rate of **milled ores, coal, carbon fines and sulfide concentrate**, combined, for **TU4.002** shall not exceed **125.0** tons per any one-hour period.
 - (2) The maximum allowable combined throughput of **calcined ore** for **TU4.002A** will not exceed **125.0** tons per any one-hour period.
 - (3) Mercury emissions from **TU4.002 and TU4.002A** shall not exceed **2.61 x 10⁻⁴** grains per dry standard cubic foot.
 - (4) **TU4.002** may operate a total of **8,760** hours per calendar year.
 - (5) Intermittent releases for **TU4.002A** during process upset conditions shall not exceed **400** hours per calendar year.
- b. **Work Practice Standards**
 - (1) **Interlock Procedure for TU4.002**
 - (a) The operator shall have **45** minutes after an interlock alarm is triggered to correct the corresponding interlock operational parameter. If corrective actions cannot restore the operational parameter(s) within **45** minutes, the Continuous Data Collection System will deactivate operator override capability and initiate normal shutdown procedure. The normal shutdown procedure shall reduce coal feeds to zero within **15** minutes, ore feeds to zero within **30** minutes and oxygen feeds to zero within **120** minutes.
 - (2) The temperature in the discharge lines of the cyclone (**CY-001**) shall be maintained at or above **800.0** °F.
 - (3) Gas Quench Tower (**GQ-001**)
 - (a) The water inflow to **GQ-001** shall operate at or above **80** gallons per minute.
 - (b) A deviation alarm shall activate if the water inflow rate to **GQ-001** is less than **50** gallons per minute.



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Section II. Specific Operating Conditions (continued)

B. Thermal Units TU4.002 and TU4.002A (continued)

2. Operating Requirements (continued)

b. Work Practices Standards (continued)

- (4) Entoleter (**EN-001**)
 - (a) **EN-001** shall operate with a differential pressure of **25** inches water column or greater.
 - (b) An alarm shall activate if the differential pressure across **EN-001** is less than **20** inches water column.
 - (c) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the differential pressure across **EN-001** is less than **15** inches of water column.
- (5) SO₂ Scrubber (**SS-001**)
 - (a) **SS-001** shall operate with a differential pressure greater than **8** inches water column.
 - (b) An alarm shall activate if the differential pressure across **SS-001** is less than **5** inches water column.
 - (c) **SS-001** shall operate with a pH greater than **8.0**.
 - (d) A deviation alarm shall activate if the pH value of **SS-001** deviates +/- **0.5** from the pH set point of **8.0**. A low alarm shall activate if the pH value of **SS-001** is less than **8.0**.
 - (e) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the pH of **SS-001** is less than **7.5**.
- (6) Mercury Scrubber #1 (**MS-001**)
 - (a) **MS-001** shall operate with a differential pressure greater than **8** inches water column.
 - (b) An alarm shall activate if the differential pressure of **MS-001** is less than **5** inches water column.
 - (c) An alarm shall activate if vacuum is not present in the chlorine feed to **MS-001**.
 - (d) **MS-001** shall operate with a pH set point of **6.9**.
 - (e) A deviation alarm shall activate if the pH value of **MS-001** deviates +/- **0.5** from the pH set point of **6.9**. A low alarm shall activate if the pH value of **MS-001** is less than **6.0**. A high alarm shall activate if the pH value of **MS-001** is equal to **7.5**.
 - (f) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the pH of **MS-001** is less than **6.5**.
 - (g) **MS-001** shall operate with an ORP set point of **825** millivolts.
 - (h) A deviation alarm shall activate if the ORP value of **MS-001** deviates below **25** millivolts from the ORP set point of **825** millivolts. A low alarm shall activate if the ORP value of **MS-001** is less than **750** millivolts
 - (i) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the ORP of **MS-001** is less than **750** millivolts.
- (7) Mercury Scrubber #2 (**MS-003**)
 - (a) **MS-003** shall operate with a differential pressure greater than **8** inches water column.
 - (b) An alarm shall activate if the differential pressure across **MS-003** is less than **5** inches water column.
 - (c) **MS-003** shall operate with a pH set point of **6.9**.
 - (d) A deviation alarm shall activate if the pH value of **MS-003** deviates +/- **0.5** from the pH set point of **6.9**. A low alarm shall activate if the pH value of **MS-003** is less than **6.0**. A high alarm shall activate if the pH value of **MS-003** is less than **7.5**.
 - (e) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the pH of **MS-003** is less than **6.0**.
 - (f) **MS-003** shall operate with an Oxidation Reduction Potential (ORP) set point of **825** millivolts.
 - (g) A deviation alarm shall activate if the ORP value of **MS-003** deviates below **25** millivolts from the ORP set point of **825** millivolts. A low alarm shall activate if the ORP value of **MS-003** is less than **750** millivolts



BUREAU OF AIR POLLUTION CONTROL

NDEP Facility ID No. A004

Permit No. AP1041-2217

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

B. Thermal Units TU4.002 and TU4.002A (continued)

2. Operating Requirements (continued)

b. Work Practices Standards (continued)

(7) Mercury Scrubber #2 (MS-003) (continued)

- (h) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the ORP of MS-003 is less than **750** millivolts.
- (i) MS-003 shall operate with an exhaust gas temperature of less than **85°F**.
- (j) An alarm shall activate if the exhaust gas temperature of MS-003 is greater than **90°F**.
- (k) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the exhaust gas temperature of MS-003 is greater than **104°F**.

(8) Tail Gas Scrubber (TS-001)

- (a) TS-001 shall operate with a differential pressure greater than **4** inches water column.
- (b) An alarm shall activate if the differential pressure across TS-001 is less than **2** inches water column.
- (c) TS-001 shall operate with a pH set point of **8.0**.
- (d) A deviation alarm shall activate if the pH value of TS-001 deviates +/- **0.5** from the pH set point of **8.0**. A low alarm shall activate if the pH value of TS-001 is less than **7.5**. A high alarm shall activate if the pH value of TS-001 is greater than **8.5**.
- (e) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the pH of TS-001 less than **7.0**.

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

a. Compliance Testing

- (1) Within 180 days of operating permit issuance for **System 2**, and annually thereafter, *the Permittee* shall conduct and record a performance test for mercury on the exhaust stack of **System 2** 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 1.7 dry standard cubic meters (60 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 2**. 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 issuance date of this operating permit, shall:

(1) West Roaster (TU4.002)

- (a) Monitor the daily combined throughput rate of **milled ores, coal, carbon fines and sulfide concentrate** for TU4.002, in tons.
- (b) Monitor daily hours of operation for TU4.002.

(2) Monitor and record the hours of process upset venting for TU4.002A each time venting occurs.

(3) Monitor the temperature in the discharge lines of CY-001 continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

(4) Gas Quench Tower (GQ-001)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the water flow rate to GQ-001 is less than **50** gallons per minute.
- (b) Monitor the water inflow to GQ-001 continuously. The hourly average flow readings, determined from each successive 15-minute period, will be recorded for the corresponding date.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

B. Thermal Units TU4.002 and TU4.002A (continued)

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

b. Monitoring (continued)

(5) Entoleter (EN-001)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure across **EN-001** is less than **20** inches of water column.
- (b) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.002** if the differential pressure across **EN-001** is less than **15** inches of water column.
- (c) Monitor the differential pressure of **EN-001** continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

(6) SO₂ Scrubber (SS-001)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure across **SS-001** is less than **5** inches of water column.
- (b) Install, operate, calibrate, and maintain an alarm to notify operator if the pH value of **SS-001** is less than **8**.
- (c) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.002** if the pH value of **SS-001** is less than **7.5**.
- (d) Monitor the differential pressure of **SS-001** continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (e) Monitor the pH of **SS-001** continuously. The hourly average pH readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

(7) Mercury Scrubber #1 (MS-001)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure of **MS-001** is less than **5** inches of water column.
- (b) Install, operate, calibrate, and maintain an alarm to notify operator if vacuum is not present in the chlorine feed to **MS-001**.
- (c) Install, operate, calibrate, and maintain alarms to notify operator when pH for **MS-001** has +/- **0.5** deviation, is less than **6.0**, and is greater than **7.5**.
- (d) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.002** if the pH value of **MS-001** is less than **6.0**.
- (e) Install, operate, calibrate, and maintain an alarm to notify operator when the ORP value for **MS-001** is less than **800** millivolts.
- (f) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.002** when the ORP value for **MS-001** is less than **750** millivolts.
- (g) Monitor the differential pressure of **MS-001**, continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (h) Monitor the line pressure in the chlorine feed to **MS-001**.
- (i) Monitor the pH of **MS-001**, continuously. The hourly average pH readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (j) Monitor the ORP of **MS-001** continuously. The hourly average ORP readings, determined from each successive 15-minute period, will be recorded for the corresponding date.



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NDEP Facility ID No. A004

Permit No. AP1041-2217

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

B. Thermal Units TU4.002 and TU4.002A (continued)

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

b. Monitoring (continued)

(8) Mercury Scrubber #2 (MS-003)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure of **MS-003** is less than **5** inches of water column.
- (b) Install, operate, calibrate, and maintain alarms to notify operator when pH for **MS-003** has +/- **0.5** deviation, is less than **6.0**, and is greater than **7.5**.
- (c) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.002** if the pH value of **MS-003** is less than **6.0**.
- (d) Install, operate, calibrate, and maintain an alarm to notify operator when the ORP value for **MS-003** is less than **800** millivolts.
- (e) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.002** when the ORP value for **MS-003** is less than **750** millivolts.
- (f) Install, operate, calibrate, and maintain an alarm to notify operator when the exhaust gas temperature of **MS-003** is greater than **90°F**.
- (g) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.002** when the exhaust gas temperature of **MS-003** is greater than **104°F**.
- (h) Monitor the differential pressure of **MS-003**, continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (i) Monitor the pH of **MS-003**, continuously. The hourly average pH readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (j) Monitor the ORP of **MS-003**, continuously. The hourly average ORP readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (k) Monitor the exhaust gas temperature of **MS-003**, continuously. The hourly average temperature readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

(9) Tail Gas Scrubber (TS-001)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure of **TS-001** is less than **2** inches of water column.
- (b) Install, operate, calibrate, and maintain alarms to notify operator when pH for **TS-001** has +/- **0.2** deviation, is less than **7.5**, and is greater than **8.5**.
- (c) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.002** if the pH value of **TS-001** is less than **7.0**.
- (d) Monitor the differential pressure of **TS-001**, continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (e) Monitor the pH of **TS-001**, continuously. The hourly average pH readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

c. Recordkeeping

The required monitoring established in Section B.3.b above shall 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 combined throughput of **milled ores, coal, carbon fines and sulfide concentrate** in tons, for **TU4.002** for the corresponding date.
- (3) The total daily hours of operation for **TU4.002** for the corresponding date.
- (4) The corresponding average hourly throughput rate in tons per hour for **TU4.002**. The average hourly throughput rate will be determined from the total daily throughput (2) and the total daily hours of operation (3) above.
- (5) The temperature in the discharge line of **CY-001**, based on one-hour periods, for the corresponding date.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

B. Thermal Units TU4.002 and TU4.002A (continued)

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

c. Recordkeeping (continued)

- (6) The water inflow rate to **GQ-001**, based on one-hour periods, for the corresponding date.
- (7) The differential pressure of **EN-001**, based on one-hour periods, for the corresponding date.
- (8) The differential pressure of **SS-001**, based on one-hour periods, for the corresponding date.
- (9) The pH of **SS-001**, based on one-hour periods, for the corresponding date.
- (10) The differential pressure of **MS-001**, based on one-hour periods, for the corresponding date.
- (11) The pH of **MS-001**, based on one-hour periods, for the corresponding date.
- (12) The ORP of **MS-001**, based on one-hour periods, for the corresponding date.
- (13) The differential pressure of **MS-003**, based on one-hour periods, for the corresponding date.
- (14) The pH of **MS-003**, based on one-hour periods, for the corresponding date.
- (15) The ORP of **MS-003**, based on one-hour periods, for the corresponding date.
- (16) The exhaust gas temperature of **MS-003**, based on one-hour periods, for the corresponding date.
- (17) The differential pressure of **TG-001**, based on one-hour periods, for the corresponding date.
- (18) The pH of **TG-001**, based on one-hour periods, for the corresponding date.
- (19) The date, time, and duration of a pressure relief valve event for **TU-4002A**.
- (20) The date, time and corrective action of any alarm event for **System 2**.

d. Reporting

- (1) The date, time and description of any interlock event and corresponding corrective action.
- (2) *The Permittee* will promptly report to the Director any emissions and or throughput exceedances from **System 2**. The report to the Director will include probable cause and any action taken to correct the exceedance. 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 operating permit.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

C. Thermal Units TU4.003 and TU4.003A Location North 4,584,932 m, East 591,635 m, UTM (Zone 11, NAD 83)

C. System 3 – East Roaster Process (System 44B/45B in AQOP AP1041-3422)		
TU	4.003	East Roaster (S2.032) Manufactured by Keeler/Dorr Oliver
TU	4.003A	East Quench Tank

1. Air Pollution Control Equipment

- a. Exhaust gases from **TU4.003 and TU4.003A** shall be ducted to a control system with 100% capture consisting of:
 - (1) Cyclone (**CY-002**)
 - (2) Gas Quench Tower (**GQ-002**)
 - (3) Entoleter (**EN-002**)
 - (4) SO₂ Scrubber (**SS-002**)
 - (5) Mercury Scrubber #1 (**MS-002**)
 - (6) Mercury Scrubber #2 (**MS-004**)
 - (7) Tails Gas Scrubber (**TS-002**)
- b. **Descriptive Stack Parameters for Final Stack**
 - (1) Height: **180** feet
 - (2) Diameter: **3.0** feet
 - (3) Temperature: approximately **125**°F
 - (4) Exhaust gases from **TU4.003** shall have a maximum volume flow rate of approximately **6,600** dry standard cubic feet per minute (DSCFM).
 - (5) **TU4.003 and TU4.003A** share a single exhaust stack.

2. Operating Requirements (NAC 445B.3679.3)

- a. **Limitations of Operation**
 - (1) The maximum allowable throughput rate of **milled ores, coal, carbon fines and sulfide concentrate**, combined, for **TU4.003** shall not exceed **125.0** tons per any one-hour period.
 - (2) The maximum allowable combined throughput of **calcined ore** for **TU4.003A** will not exceed **125.0** tons per any one-hour period.
 - (3) Mercury emissions from **TU4.003 and TU4.003A** shall not exceed **2.61 x 10⁻⁴** grains per dry standard cubic foot.
 - (4) **TU4.003** may operate a total of **8,760** hours per calendar year.
 - (5) Intermittent releases for **TU4.003A** during process upset conditions shall not exceed **400** hours per calendar year.
- b. **Work Practice Standards**
 - (1) **Interlock Procedure for TU4.003**
 - (a) The operator shall have **45** minutes after an interlock alarm is triggered to correct the corresponding interlock operational parameter. If corrective actions cannot restore the operational parameter(s) within **45** minutes, the Continuous Data Collection System will deactivate operator override capability and initiate normal shutdown procedure. The normal shutdown procedure shall reduce coal feeds to zero within **15** minutes, ore feeds to zero within **30** minutes and oxygen feeds to zero within **120** minutes.
 - (2) The temperature in the discharge lines of the cyclone (**CY-002**) shall be maintained at or above **800.0** °F.
 - (3) Gas Quench Tower (**GQ-002**)
 - (a) The water inflow to **GQ-002** shall operate at or above **80** gallons per minute.
 - (b) A deviation alarm shall activate if the water inflow rate to **GQ-002** is less than **50** gallons per minute.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

C. Thermal Units TU4.003 and TU4.003A (continued)

2. Operating Requirements (continued)

b. Work Practices Standards (continued)

- (4) Entoleter (EN-002)
 - (a) EN-002 shall operate with a differential pressure of **25** inches water column or greater.
 - (b) An alarm shall activate if the differential pressure across EN-002 is less than **20** inches water column.
 - (c) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the differential pressure across EN-002 is less than **15** inches of water column.
- (5) SO₂ Scrubber (SS-002)
 - (a) SS-002 shall operate with a differential pressure greater than **8** inches water column.
 - (b) An alarm shall activate if the differential pressure across SS-002 is less than **5** inches water column.
 - (c) SS-002 shall operate with a pH greater than **8.0**.
 - (d) A deviation alarm shall activate if the pH value of SS-002 deviates +/- **0.5** from the pH set point of **8.0**. A low alarm shall activate if the pH value of SS-002 is less than **8.0**.
 - (e) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the pH of SS-002 is less than **7.5**.
- (6) Mercury Scrubber #1 (MS-002)
 - (a) MS-002 shall operate with a differential pressure greater than **8** inches water column.
 - (b) An alarm shall activate if the differential pressure of MS-002 is less than **5** inches water column.
 - (c) An alarm shall activate if vacuum is not present in the chlorine feed to MS-002.
 - (d) MS-002 shall operate with a pH set point of **6.9**.
 - (e) A deviation alarm shall activate if the pH value of MS-002 deviates +/- **0.5** from the pH set point of **6.9**. A low alarm shall activate if the pH value of MS-002 is less than **6.0**. A high alarm shall activate if the pH value of MS-002 is equal to **7.5**.
 - (f) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the pH of MS-002 is less than **6.5**.
 - (g) MS-002 shall operate with an ORP set point of **825** millivolts.
 - (h) A deviation alarm shall activate if the ORP value of MS-002 deviates below **25** millivolts from the ORP set point of **825** millivolts. A low alarm shall activate if the ORP value of MS-002 is less than **750** millivolts
 - (i) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the ORP of MS-002 is less than **750** millivolts.
- (7) Mercury Scrubber #2 (MS-004)
 - (a) MS-004 shall operate with a differential pressure greater than **8** inches water column.
 - (b) An alarm shall activate if the differential pressure across MS-004 is less than **5** inches water column.
 - (c) MS-004 shall operate with a pH set point of **6.9**.
 - (d) A deviation alarm shall activate if the pH value of MS-004 deviates +/- **0.5** from the pH set point of **6.9**. A low alarm shall activate if the pH value of MS-004 is less than **6.0**. A high alarm shall activate if the pH value of MS-004 is less than **7.5**.
 - (e) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the pH of MS-004 is less than **6.0**.
 - (f) MS-004 shall operate with an Oxidation Reduction Potential (ORP) set point of **825** millivolts.
 - (g) A deviation alarm shall activate if the ORP value of MS-004 deviates below **25** millivolts from the ORP set point of **825** millivolts. A low alarm shall activate if the ORP value of MS-004 is less than **750** millivolts



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Section II. Specific Operating Conditions (continued)

C. Thermal Units TU4.003 and TU4.003A (continued)

2. Operating Requirements (continued)

b. Work Practices Standards (continued)

(7) Mercury Scrubber #2 (MS-004) (continued)

- (h) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the ORP of MS-004 is less than 750 millivolts.
- (i) MS-004 shall operate with an exhaust gas temperature of less than 85°F.
- (j) An alarm shall activate if the exhaust gas temperature of MS-004 is greater than 90°F.
- (k) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the exhaust gas temperature of MS-004 is greater than 104°F.

(8) Tail Gas Scrubber (TS-002)

- (a) TS-002 shall operate with a differential pressure greater than 4 inches water column.
- (b) An alarm shall activate if the differential pressure across TS-001 is less than 2 inches water column.
- (c) TS-002 shall operate with a pH set point of 8.0.
- (d) A deviation alarm shall activate if the pH value of TS-002 deviates +/- 0.5 from the pH set point of 8.0. A low alarm shall activate if the pH value of TS-002 is less than 7.5. A high alarm shall activate if the pH value of TS-001 is greater than 8.5.
- (e) An interlock alarm and the subsequent interlock procedure as defined in Section II.B.2.b(1) above, shall activate if the pH of TS-002 less than 7.0.

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

a. Compliance Testing

- (1) Within 180 days of operating permit issuance for System 3, and annually thereafter, *the Permittee* shall conduct and record a performance test for mercury on the exhaust stack of System 3 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 1.7 dry standard cubic meters (60 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 3. 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 issuance date of this operating permit, shall:

(1) West Roaster (TU4.003)

- (a) Monitor the daily combined throughput rate of milled ores, coal, carbon fines and sulfide concentrate for TU4.003, in tons.
- (b) Monitor daily hours of operation for TU4.003.

(2) Monitor and record the hours of process upset venting for TU4.003A each time venting occurs.

(3) Monitor the temperature in the discharge lines of CY-002 continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

(4) Gas Quench Tower (GQ-002)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the water flow rate to GQ-002 is less than 50 gallons per minute.
- (b) Monitor the water inflow to GQ-002 continuously. The hourly average flow readings, determined from each successive 15-minute period, will be recorded for the corresponding date.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

C. Thermal Units TU4.003 and TU4.003A (continued)

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

b. Monitoring (continued)

(5) Entoleter (EN-002)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure across **EN-002** is less than **20** inches of water column.
- (b) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.003** if the differential pressure across **EN-002** is less than **15** inches of water column.
- (c) Monitor the differential pressure of **EN-002** continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

(6) SO₂ Scrubber (SS-002)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure across **SS-002** is less than **5** inches of water column.
- (b) Install, operate, calibrate, and maintain an alarm to notify operator if the pH value of **SS-002** is less than **8**.
- (c) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.003** if the pH value of **SS-002** is less than **7.5**.
- (d) Monitor the differential pressure of **SS-002** continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (e) Monitor the pH of **SS-002** continuously. The hourly average pH readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

(7) Mercury Scrubber #1 (MS-002)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure of **MS-002** is less than **5** inches of water column.
- (b) Install, operate, calibrate, and maintain an alarm to notify operator if vacuum is not present in the chlorine feed to **MS-002**.
- (c) Install, operate, calibrate, and maintain alarms to notify operator when pH for **MS-002** has +/- **0.5** deviation, is less than **6.0**, and is greater than **7.5**.
- (d) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.003** if the pH value of **MS-002** is less than **6.0**.
- (e) Install, operate, calibrate, and maintain an alarm to notify operator when the ORP value for **MS-002** is less than **800** millivolts.
- (f) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for **TU4.003** when the ORP value for **MS-002** is less than **750** millivolts.
- (g) Monitor the differential pressure of **MS-002**, continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (h) Monitor the line pressure in the chlorine feed to **MS-002**.
- (i) Monitor the pH of **MS-002**, continuously. The hourly average pH readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (j) Monitor the ORP of **MS-002** continuously. The hourly average ORP readings, determined from each successive 15-minute period, will be recorded for the corresponding date.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

C. Thermal Units TU4.003 and TU4.003A (continued)

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

b. Monitoring (continued)

(8) Mercury Scrubber #2 (MS-004)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure of MS-004 is less than 5 inches of water column.
- (b) Install, operate, calibrate, and maintain alarms to notify operator when pH for MS-004 has +/- 0.5 deviation, is less than 6.0, and is greater than 7.5.
- (c) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for TU4.003 if the pH value of MS-004 is less than 6.0.
- (d) Install, operate, calibrate, and maintain an alarm to notify operator when the ORP value for MS-004 is less than 800 millivolts.
- (e) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for TU4.003 when the ORP value for MS-004 is less than 750 millivolts.
- (f) Install, operate, calibrate, and maintain an alarm to notify operator when the exhaust gas temperature of MS-004 is greater than 90°F.
- (g) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for TU4.003 when the exhaust gas temperature of MS-004 is greater than 104°F.
- (h) Monitor the differential pressure of MS-004, continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (i) Monitor the pH of MS-004, continuously. The hourly average pH readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (j) Monitor the ORP of MS-004, continuously. The hourly average ORP readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (k) Monitor the exhaust gas temperature of MS-004, continuously. The hourly average temperature readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

(9) Tail Gas Scrubber (TS-002)

- (a) Install, operate, calibrate, and maintain an alarm to notify operator if the differential pressure of TS-002 is less than 2 inches of water column.
- (b) Install, operate, calibrate, and maintain alarms to notify operator when pH for TS-002 has +/- 0.2 deviation, is less than 7.5, and is greater than 8.5.
- (c) Install, operate, calibrate, and maintain an interlock to initiate the interlock procedure for TU4.003 if the pH value of TS-002 is less than 7.0.
- (d) Monitor the differential pressure of TS-002, continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (e) Monitor the pH of TS-002, continuously. The hourly average pH readings, determined from each successive 15-minute period, will be recorded for the corresponding date.

c. Recordkeeping

The required monitoring established in Section C.3.b above shall 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 combined throughput of **milled ores, coal, carbon fines and sulfide concentrate** in tons, for TU4.003 for the corresponding date.
- (3) The total daily hours of operation for TU4.003 for the corresponding date.
- (4) The corresponding average hourly throughput rate in tons per hour for TU4.003. The average hourly throughput rate will be determined from the total daily throughput (2) and the total daily hours of operation (3) above.
- (5) The temperature in the discharge line of CY-002, based on one-hour periods, for the corresponding date.



BUREAU OF AIR POLLUTION CONTROL

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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

C. Thermal Units TU4.003 and TU4.003A (continued)

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

c. Recordkeeping (continued)

- (6) The water inflow rate to **GQ-002**, based on one-hour periods, for the corresponding date.
- (7) The differential pressure of **EN-002**, based on one-hour periods, for the corresponding date.
- (8) The differential pressure of **SS-002**, based on one-hour periods, for the corresponding date.
- (9) The pH of **SS-002**, based on one-hour periods, for the corresponding date.
- (10) The differential pressure of **MS-002**, based on one-hour periods, for the corresponding date.
- (11) The pH of **MS-002**, based on one-hour periods, for the corresponding date.
- (12) The ORP of **MS-002**, based on one-hour periods, for the corresponding date.
- (13) The differential pressure of **MS-004**, based on one-hour periods, for the corresponding date.
- (14) The pH of **MS-004**, based on one-hour periods, for the corresponding date.
- (15) The ORP of **MS-004**, based on one-hour periods, for the corresponding date.
- (16) The exhaust gas temperature of **MS-004**, based on one-hour periods, for the corresponding date.
- (17) The differential pressure of **TG-002**, based on one-hour periods, for the corresponding date.
- (18) The pH of **TG-001**, based on one-hour periods, for the corresponding date.
- (19) The date, time, and duration of a pressure relief valve event for **TU-4003A**.
- (20) The date, time and corrective action of any alarm event for **System 3**.

d. Reporting

- (1) The date, time and description of any interlock event and corresponding corrective action.
- (2) *The Permittee* will promptly report to the Director any emissions and or throughput exceedances from **System 3**. The report to the Director will include probable cause and any action taken to correct the exceedance. 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 operating permit.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

D. Thermal Units TU4.004 through TU4.007 Location North 4,536.20 km, East 554.61 km, UTM (Zone 11, NAD 83)

System 4 – Electrowinning Cells and P/B Tanks (System 49 in AQOP AP1041-3422)		
TU	4.004	Electrowinning Cell I (S2.038.1)
TU	4.005	Electrowinning Cell II (S2.038.2)
TU	4.006	Pregnant Tank (S2.038.3)
TU	4.007	Barren Tank (S2.038.4)

1. Air Pollution Control Equipment

a. Exhaust gases from **TU4.004 – TU4.007** shall be ducted to a control system with 100% capture consisting of:

(1) Sulfur-Impregnated Carbon Tray (**SIC-002**)

b. **Descriptive Stack Parameters for Final Control**

(1) Height: **50** feet

(2) Diameter: **3** feet

(3) Temperature: approximately **130**°F

(4) Exhaust gases from **TU4.004 – TU4.007** shall have a maximum volume flow rate of **1,536** dry standard cubic feet per minute (DSCFM).

(5) Exhaust gases from **TU4.004 – TU4.007** are ducted through a single stack.

2. Operating Requirements (NAC 445B.3679.3)

a. **Limitations of Operation**

(1) **Electrowinning and P/B Tanks (TU4.004 – TU4.007)**

(a) The maximum allowable throughput rate of **precious metal bearing solution** for **TU4.004 through TU4.007**, each, shall not exceed **100.0** gallons per minute.

(b) Mercury emissions from **TU4.004 through TU4.007**, combined, shall not exceed **5.0 x 10⁻⁵** grains per dry standard cubic foot.

(2) **TU4.004 through TU4.007**, each, may operate a total of **8,760** hours per calendar year.

b. **Work Practices Standards**

(1) **Electrowinning (TU4.004 and TU4.005)**

(a) Lids on **TU4.004 and TU4.005** shall be closed during operation.

(2) **Pregnant and Barren Tanks (TU4.006-TU4.007)**

(a) **TU4.006 and TU4.007**, each, shall each be visually inspected every 6 months for corrosion and leaks.

(3) Sulfur-Impregnated Carbon Tray (**SIC-002**)

(a) The **carbon tray scrubber** shall contain at least **4,000** pounds of sulfur impregnated carbon during all times of operation.

(b) The pressure drop across **SIC-002** shall be maintained at or above **3.0** inches of water column.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

D. Thermal Units TU4.004 through TU4.007 (continued)

2. Operating Requirements (continued)

b. Work Practice Standards (continued)

(3) Sulfur-Impregnated Carbon Tray (**SIC-002**) (continued)

- (c) Replace the sulfur-impregnated carbon in **SIC-002** according to the following schedule: Conduct an initial sampling of the sulfur-impregnated carbon every calendar quarter. A composite sample shall be taken and analyzed. The depth of the sample location shall be recorded. Using this sample the percentage of mercury by weight shall be calculated. Sampling will continue quarterly, at the same sample depth location, until 50% of the 20% by weight of the carbon loading capacity, as specified by the manufacturer, is reached. Upon reaching 50% of the 20% by weight of the carbon loading capacity, sampling of the carbon will occur monthly until 90% of the 20% by weight of the carbon loading capacity is reached. The carbon will be replaced with an equivalent performing sulfur impregnated carbon no later than 30 days after reaching 90% of the 20% by weight 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 or Semisolid Waste (Manual Cold-Vapor Technique); or
 - iii. An alternative test method as approved by the Director.
- (d) Any sulfur impregnated carbon replaced in **SIC-002** shall be replaced with only the original manufacturer's design specification sulfur impregnated carbon or equivalent performing carbon, or better.
- (e) The original manufacturer's design specifications for the sulfur-impregnated carbon used in **SIC-002** shall be kept on site.

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

a. Compliance Testing

- (1) Within 180 days of operating permit issuance for **System 4**, and annually thereafter, *the Permittee* shall conduct and record a performance test for mercury on the exhaust stack of **System 4** 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 1.7 dry standard cubic meters (60 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 4**. 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.
- (4) **TU4.004 through TU4.007** shall be tested simultaneously with no other units in operation.

b. Monitoring

The Permittee, upon issuance date of this operating permit, shall:

- (1) Monitor the daily hours of operation for **TU4.004 through TU4.007**, each.
- (2) Monitor the daily throughput of **precious metal bearing solution** for **TU4.004 through TU4.007** each in gallons per minute.
- (3) Monitor the pressure drop across **SIC-002**, continuously. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (4) Monitor the percentage of mercury, by weight, on the carbon in **SIC-002** quarterly until reaching 50% of the loading capacity, and then monthly until reaching 90% of the loading capacity.

c. Recordkeeping

The required monitoring established in Section D.3.b above shall 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 hours of operation for **TU4.004 through TU 4.007** each, per batch for the corresponding date.
- (3) The throughput rate in gallons per minute of **precious metal bearing solution** to **TU4.004 through TU4.007** each, once during each day of operation, for the corresponding date.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

D. Thermal Units TU4.004 through TU4.007 (continued)

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

c. Recordkeeping (continued)

- (4) The results of the 6-month calendar inspection for **TU4.006 and TU4.007**.
- (5) The differential pressure across **SIC-002**, based on one-hour periods, for the corresponding date.
- (6) The percentage mercury loading by weight sampled from **SIC-002**, for the corresponding date.
- (7) The sample location from **SIC-002**, for the corresponding date.
- (8) The amount of sulfur impregnated carbon replaced in **SIC-002**, for the corresponding date.
- (9) The manufacturer and specifications of the sulfur impregnated carbon will be retained on site for inspection.

d. Reporting

- (1) *The Permittee* will promptly report to the Director any emissions and or throughput exceedances from **System 4**. The report to the Director will include probable cause and any action taken to correct the exceedence. 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 operating permit.



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section II. Specific Operating Conditions (continued)

E. Thermal Units TU4.008 through TU4.009 Location North 4,536.28 km, East 589.61 km, UTM (Zone 11, NAD 83)

System 5 – Refinery (System 50 in AOP AP1041-3422)		
TU	4.008	Mercury Retort (S2.039.1) (Manufactured by Unicast, Inc. SN RT-13-06-06)
TU	4.009	Induction Furnace (S2.039.2)

1. Air Pollution Control Equipment

- a. Exhaust gases from **TU4.008** shall be ducted to a control system with 100% capture consisting of:
 - (1) Chilled Condenser System (**C-001**).
 - (2) Carbon Pot (**MS-006**)
 - (3) Sulfur-Impregnated Carbon Tray Scrubber (**SIC-001**)
- b. Exhaust gases from **TU4.009** shall be ducted to a control system with 100% capture consisting of:
 - (1) Baghouse (**BG-002**)
 - (2) Sulfur-Impregnated Carbon Tray Scrubber (**SIC-001**)
- c. **Descriptive Stack Parameters for Final Control**
 - (1) Height: **50** feet
 - (2) Diameter: **3** feet
 - (3) Temperature: approximately **130°F**
 - (4) Exhaust gases from **TU4.009 – TU4.009** shall have a maximum volume flow rate of **3,818** dry standard cubic feet per minute (DSCFM).

2. Operating Requirements (NAC 445B.3679.3)

- a. **Limitations of Operation**
 - (1) **Retort (TU4.008)**
 - (a) The maximum allowable throughput rate of **precious metal laden material** for **TU4.008** shall not exceed **800.0** pounds per batch. “Precious metal laden material” shall consist only of the following:
 - i. Material loaded with precious metals such as gold and silver, along with various other metals that is produced by electro winning, the Merrill-Crowe process, flotation and gravity separation processes, and other gold concentration or precipitation processes.
 - ii. 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.
 - (b) Mercury emissions from **TU4.008** shall not exceed **5.0 x 10⁻⁵** grains per dry standard cubic foot.
 - (c) Precious metal-laden material shall be retorted in pans specified by the retort manufacturer and not to exceed the volume capacity specified by the manufacturer, per pan.
 - (2) **Furnace (TU4.009)**
 - (a) The maximum allowable throughput rate of **retorted precious metal laden material and flux** for **TU4.009** shall not exceed **500.0** pounds per batch. **Retorted precious metal laden material** shall consist of precious metal laden material, as defined in section II.E.2.a (1) (a). i and ii, which has been retorted.
 - (b) Mercury emissions from **TU4.009** shall not exceed **5.0 x 10⁻⁶** grains per dry standard cubic foot.
 - (3) **TU4.008** and **TU4.009** shall not be operated simultaneously.
 - (4) **TU4.008** and **TU4.009**, each, may operate a total of **8,760** hours per calendar year.
- b. **Work Practices Standards**
 - (1) **Retort (TU4.008)**
 - (a) **TU 4.008** shall operate under negative gauge pressure greater than 200 mmHg.
 - (b) **TU4.008** shall automatically shut off, per interlock, if the negative gauge pressure falls below 200 mmHg.

Section II. Specific Operating Conditions (continued)



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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

E. Thermal Units TU4.008 through TU4.009 (continued)

2. Operating Requirements (continued)

b. Work Practices Standards (continued)

(2) Smelt Furnace (TU4.009)

(a) TU4.009 shall only smelt retorted precious metal laden material as defined in II.E.2.a(2).

(3) Chilled Condenser System (C-001)

(a) The water temperature exiting the chiller shall be maintained below 60°F.

(b) Condensed mercury from C-001 shall be collected weekly.

(c) The exhaust gas exiting C-001 shall be maintained below 75°F.

(d) TU4.008 shall automatically shut off, per interlock, if the exhaust temperature exiting C-001 exceeds 90°F.

(e) The chilled water flow rate to C-001 shall be maintained between 3 – 5 gallons per minute.

(f) TU4.008 shall automatically shut off, per interlock, if chilled water flow to C-001 is absent.

(4) Baghouse (BG-002)

(a) Differential pressure drop across BG-002 shall not exceed 25 inches water column

(5) Carbon Tray Scrubber (SIC-001)

(a) The carbon tray scrubber shall contain at least 2,000 pounds of sulfur impregnated carbon during all times of operation.

(b) The differential pressure drop across SIC-001 shall be maintained above 3.0 inches of water column.

(c) The exhaust temperature exiting SIC-001 shall not exceed 130°F.

(d) TU4.008 shall automatically shut off, per interlock, if the exhaust temperature exiting SIC-001 exceeds 130° F

(e) Replace the sulfur-impregnated carbon in SIC-001 according to the following schedule: Conduct an initial sampling of the sulfur-impregnated carbon every calendar quarter. A composite sample shall be taken and analyzed. The depth of the sample location shall be recorded. Using this sample the percentage of mercury by weight shall be calculated. Sampling will continue quarterly, at the same sample depth location, until 50% of the 20% by weight of the carbon loading capacity, as specified by the manufacturer, is reached. Upon reaching 50% of the 20% by weight of the carbon loading capacity, sampling of the carbon will occur monthly until 90% of the 20% by weight of the carbon loading capacity is reached. The carbon will be replaced with an equivalent performing sulfur impregnated carbon no later than 30 days after reaching 90% of the 20% by weight 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 or Semisolid Waste (Manual Cold-Vapor Technique); or

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

(f) Any sulfur impregnated carbon replaced in SIC-001 shall be replaced with only the original manufacturer's design specification sulfur impregnated carbon or equivalent performing carbon, or better.

(g) The original manufacturer's design specifications for the sulfur-impregnated carbon used in SIC-001 shall be kept on site.

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

a. Compliance Testing

(1) Within 180 days of operating permit issuance for System 5, and annually thereafter, *the Permittee* shall conduct and record a performance test for mercury on the exhaust stack of System 5, while only TU4.008 is in operation 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 1.7 dry standard cubic meters (60 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 on TU4.008, conduct and record a material assay from TU4.008. 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).

Section II. Specific Operating Conditions (continued)



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Issued to: Veris Gold USA, Inc.

E. Thermal Units TU4.008 through TU4.009 (continued)

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

a. Compliance Testing (continued)

- (3) Within 180 days of operating permit issuance for **System 5**, and annually thereafter, *the Permittee* shall conduct and record a performance test for mercury on the exhaust stack of **System 5**, while only **TU4.009** is in operation 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 1.7 dry standard cubic meters (60 dscf) or be conducted for up to two hours in an effort to collect this sample volume.
- (4) Simultaneously, during the Method 29 compliance test on **TU4.009**, conduct and record a material assay from **TU4.009**. 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).
- (5) The Permittee shall comply with the requirements in Section I.N of this operating permit for all compliance testing.
- (6) **TU4.008** and **TU4.009** shall be tested individually.

b. Monitoring

The Permittee, upon issuance date of this operating permit, shall:

- (1) Monitor the daily batch weight of precious metal laden material for **TU4.008** in pounds.
- (2) Monitor the daily hours of operation for **TU4.008**, for each batch, for each day of operation.
- (3) Monitor the daily batch weight of retorted precious metal laden material for **TU4.009** in pounds.
- (4) Monitor the daily hours of operation for **TU4.009**, for each batch, for each day of operation.
- (5) Install, operate, calibrate, and maintain an interlock to shut down **TU4.008** if negative gauge pressure is less than 200 mmHg.
- (6) Install, operate, calibrate, and maintain an interlock to shut down **TU4.008** if the exhaust outlet temperature of **C-001** exceeds **90°F**.
- (7) Install, operate, calibrate, and maintain an interlock to shut down **TU4.008** if water flow to **C-001** is absent.
- (8) Install, operate, calibrate, and maintain an interlock to shut down **TU4.008** if the exhaust temperature exiting **SIC-001** exceeds **130°F**.
- (9) Monitor the negative gauge pressure of **TU4.008** continuously during operation. The hourly average pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (10) Monitor the chilled water temperature entering **C-001** continuously during operation. The hourly average temperature readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (11) Monitor the outlet exhaust gas temperature of **C-001** continuously during operation. The hourly average temperature readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (12) Monitor the chilled water flow rate to **C-001** continuously during operation. The hourly average flow rate readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (13) Monitor the differential pressure drop across **BG-002**, once per batch, in inches water column.
- (14) Monitor the differential pressure drop across **SIC-001** continuously during operation. The hourly average differential pressure readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (15) Monitor the exhaust temperature exiting **SIC-001** continuously during operation. The hourly average temperature readings, determined from each successive 15-minute period, will be recorded for the corresponding date.
- (16) Monitor the percentage of mercury, by weight, on the carbon in **SIC-001** quarterly until reaching 50% of the loading capacity, and then monthly until reaching 90% of the loading capacity.

c. Recordkeeping

The required monitoring established in Section E.3.b above shall 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 hours of operation for **TU4.008** per batch for the corresponding date.
- (3) The total daily batch rate of **precious metal laden material** in tons for **TU4.008** per batch for the corresponding date.
- (4) The total daily hours of operation for **TU4.009** per batch for the corresponding date.

Section II. Specific Operating Conditions (continued)



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Issued to: Veris Gold USA, Inc.

E. Thermal Units TU4.008 through TU4.009 (continued)

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

c. Recordkeeping (continued)

- (5) The total daily batch rate of **retorted precious metal laden material** in tons for **TU4.009** per batch for the corresponding date.
- (6) The negative gauge pressure of **TU4.008**, based on one-hour periods, for the corresponding date.
- (7) The exhaust gas temperature in degrees Fahrenheit exiting **C-001**, based on one-hour periods, for the corresponding date.
- (8) The chilled water flow rate entering **C-001**, based on one-hour periods, for the corresponding date.
- (9) The amount of condensed mercury collected from **C-001**, in pounds, for the corresponding date.
- (10) The temperature of the chilled water entering **C-001**, based on one-hour periods, for the corresponding date.
- (11) The differential pressure drop across **BG-002**, per batch, for the corresponding date.
- (12) The date, time and corrective action of any interlock event for **System 5**.
- (13) The differential pressure drop across **SIC-001**, based on one-hour periods, for the corresponding date.
- (14) The exhaust temperature exiting **SIC-001**, based on one-hour periods, for the corresponding date.
- (15) The percentage of mercury by weight in **SIC-001**, for the corresponding date.
- (16) The date, time, and weight of each carbon replacement of **SIC-001**.
- (17) The sample location from **SIC-001**, for the corresponding date.
- (18) The manufacturer and specifications of the sulfur impregnated carbon will be retained on site for inspection.

d. Reporting

- (1) The date, time and description of any interlock event and corresponding corrective action.
- (2) **The Permittee** will promptly report to the Director any emissions and or throughput exceedances from **System 5**. The report to the Director will include probable cause and any action taken to correct the exceedence. 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 operating permit.

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



BUREAU OF AIR POLLUTION CONTROL

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MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Veris Gold USA, Inc.

Section III. Amendments

DRAFT

This operating 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: _____ /DRAFT/

Issued by: Jeffrey Kinder, P.E.
Supervisor, Permitting Branch
Bureau of Air Pollution Control

Phone: _____ (775) 687-9475 **Date:** _____ /DRAFT/