

PERMIT NO. 3341-245-0209-E-01-0

ISSUANCE DATE:



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality Permit

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

Facility Name: Aurubis Richmond LLC
Facility Address: Valencia Way (Augusta Corporate Pkwy)
Augusta, Georgia 30906 Richmond County
Mailing Address: 1105 W Peachtree Street NE Ste 1000
Atlanta, GA 30309
Facility AIRS Number: 04-13-245-00209

is issued a Permit for the following:

Construction and operation of a copper recycling facility and secondary copper smelter.

This Permit is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit.

This Permit may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 28364 dated April 11, 2022; any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 22 pages.



DRAFT

Richard E. Dunn, Director
Environmental Protection Division

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1. General Requirements

- 1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source.
- 1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere.
- 1.3 The Permittee shall submit a Georgia Air Quality Permit application to the Division prior to the commencement of any modification, as defined in 391-3-1-.01(pp), which may result in air pollution and which is not exempt under 391-3-1-.03(6). Such application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. The application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity and pollutant emission rates of the plant before and after the change, and the anticipated completion date of the change.
- 1.4 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and shall be retained for at least five (5) years following the date of entry.
- 1.5 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.

2. Allowable Emissions

- 2.1 The Permittee shall not discharge, or cause the discharge into the atmosphere from the entire facility any gases which contain emissions in quantities exceeding the allowable rate as indicated below:
[Avoidance of 40 CFR 52.21]
 - a. Nitrogen oxides (NO_x) in excess of 99 tons during any twelve-month consecutive period.
 - b. Carbon monoxide (CO) in excess of 99 tons during any twelve-month consecutive period.

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- c. Volatile organic compounds (VOC) in excess of 99 tons during any twelve-month consecutive period.

- 2.2 The Permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants as found in 40 CFR 63 Subpart A – “*General Provisions*” and 40 CFR 63 Subpart FFFFFFFF – “*National Emission Standards for Hazardous Air Pollutants for Secondary Copper Smelting Area Sources*” for the operation of the following equipment.
[40 CFR 63 Subpart A and FFFFFFFF]
 - a. Four (4) Top Blown Rotary Converters including Preheaters (Source Codes TBRC1, TBRC2, TBRC3, and TRBC4),
 - b. Lead Tin Alloy Furnace/Ladle Treatment Stand (Source Codes LTAF/LTS),
 - c. Slag Holding Furnace/Copper Casting Unit/Dry Slag Granulation (Source Codes SHF/CCU/DSG),

- 2.3 Emissions of particulate matter (PM) from each of the baghouses (Emission Control IDs BH01, BH02, BH03, BH04, BH05, and BH06) shall not exceed 0.002 grains/dry standard cubic foot.
[40 CFR 63.11155]

- 2.4 The Permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ – “*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*” and the applicable provisions of Subpart A, "General Provisions" as defined in Table 8 to Subpart ZZZZ to Part 63 for the operation of the three Emergency Generators (Source Codes EG01, EG02, and EG03).
[40 CFR 63 Subpart A and 40 CFR 63 Subpart ZZZZ]

- 2.5 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A - "General Provisions" and 40 CFR 60 Subpart IIII - "*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines,*" for operation of the three Emergency Generators (Source Codes EG01, EG02, and EG03).
[40 CFR 60 Subpart A and 40 CFR 60 Subpart IIII]

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- 2.6 The Permittee shall not operate the three Emergency Generators (Source Codes EG01, EG02 and EG03) for more than 500 hours, for any reason, during any twelve-month consecutive period.
[391-3-1-.03(2)(c)]
- 2.7 In order for generators (Source Codes EG01, EG02 and EG03) to be considered an emergency stationary ICE under 40 CFR 60 Subpart IIII, the Permittee shall limit any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year. If the generators aren't operated according to the following requirements, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. The Permittee shall operate all emergency generators for any combination of the purposes specified in this condition for a maximum of 100 hours per calendar year.
[40 CFR 60.4211(f)]
- a. Emergency generators may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Division for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - b. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
- 2.8 The Permittee shall only use distillate fuel oil that has a maximum sulfur content of 15 ppm (0.0015% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent in Emergency Generators (Source Codes EG01, EG02 and EG03).
[40 CFR 60.4207(b)]
- 2.9 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from the Top Blown Rotary Converters including Preheaters, the Lead Tin Alloy Furnace/Ladle Treatment Stand (Source Codes TBRC1, TRBC2, TBRC3 ,TRBC4, and LTAF/LTS), Slag Holding Furnace/Copper Casting Unit/Dry Slag Granulation (Source Codes SHF/CCU/DSG), Ladle Heaters (Source Code LH), Launderers (Source Code LNDR), Baghouses (Source Codes BH01 through BH06), Roof Vents (Source Codes RV01 through

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RV06), and the Carbon and Flue Dust Silos (Source Codes CS01, CS02, FDS01, and FDS02), any gases which exhibit visible emissions, the opacity of which is equal to or greater than 40 percent, unless otherwise specified.

[391-3-1-.02(2)(b)]

2.10 The Permittee shall not cause, let, suffer, permit, or allow the emission from any source, particulate matter (PM) in total quantities equal to or exceeding the allowable rate as calculated using the applicable equation below, unless otherwise specified in this Permit.

[391-3-1-.02(2)(e)1]

a. $E = 4.1P^{0.67}$, for process input weight rate up to and including 30 tons per hour;

b. $E = 55P^{0.11} - 40$, for process input weight rate in excess of 30 tons per hour.

Where:

E = emission rate in pounds per hour

P = process input weight rate in tons per hour, excluding moisture

2.11 The Permittee shall not burn fuel containing more than 2.5 percent sulfur, by weight, in the Top Blown Rotary Converters including Preheaters, Lead Tin Alloy Furnace/Ladle Treatment Stand (Source Codes TBRC1, TBRC2, TBRC3, TBRC4 and LTAF/LTS), Slag Holding Furnace/Copper Casting Unit/Dry Slag Granulation (Source Codes SHF/CCU/DSG), Ladle Heaters (Source Code LH), Launderers (Source Code LNDR) and Post-Combustors (Emission Control IDs COMB1 and COMB2), unless otherwise specified by the Director.

[391-3-1-.02(2)(g)2]

2.12 The Permittee shall fire natural gas exclusively in the Top Blown Rotary Converters including Preheaters, Lead Tin Alloy Furnace/Ladle Treatment Stand/Ladle Heater (Source Codes TBRC1, TBRC2, TBRC3, TBRC4, LTAF/LTS), Slag Holding Furnace/Copper Casting Unit/Dry Slag Granulation (Source Codes SHF/CCU/DSG), Ladle Heaters (Source Code LH), Launderers (Source Code LNDR) and Post-Combustors (Emission Control IDs COMB1 and COMB2).

[391-3-1-.03(2)(c)]

2.13 Except during periods of startup, shutdown, and malfunction, the Permittee shall operate the emission units in Attachment A with associated air pollution control device to control particulate matter emissions at all times that the emission units are operating.

[391-3-1-.03(2)(c)]

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3. Fugitive Emissions

3.1 The Permittee shall take all reasonable precautions to prevent fugitive dust from becoming airborne from any operation, process, handling, and transportation or storage facility. The opacity from any fugitive dust source shall not equal or exceed twenty percent. Reasonable precautions that should be taken to prevent dust from becoming airborne include, but are not limited to, the following:

[391-3-1-.02(2)(n)]

- a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
- b. Application of asphalt, water, or suitable chemicals on dirt roads, materials, stockpiles, and other surfaces that can give rise to airborne dusts;
- c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods can be employed during sandblasting or other similar operations;
- d. Covering, at all times when in motion, open-bodied trucks, transporting materials likely to give rise to airborne dust; and
- e. The prompt removal of earth or other material from paved streets onto which earth or other material has been deposited.

4. Process & Control Equipment

4.1 Routine maintenance shall be performed on all air pollution control equipment. The Permittee shall record and maintain records of routine maintenance in a form suitable for inspection or submittal to the Division. The records shall be retained for at least five years following the date of the maintenance activities.

4.2 The Permittee shall operate the Post-Combustors (Emission Control IDs COMB1 and COMB2) at times when the temperature in the Top Blown Rotary Converters (Source Codes TBRC1, TBRC2, TBRC3, TBRC4) is less than the temperature value established during the most recent Division-approved performance test. At all times emissions are being vented to the Post-Combustors (Emission Control IDs COMB1 and COMB2), the temperature of the combustion chamber shall be maintained at or greater than 1000°C or the value established during the most recent Division-approved performance test.

[Avoidance of 40 CFR 52.21, 391-3-1-.02(2)(b) and 391-3-1-.03(2)(c)]

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- 4.3 The Permittee install, operate, and maintain a bag leak detection system on all baghouses used to comply with the PM limit specified in Condition 2.3 (Emission Control IDs BH01, BH02, BH03, BH04, BH05, and BH06). Each bag leak detection system must meet the following specifications and requirements [40 CFR 63.11155(d)(1)(i) through (viii)]
- a. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.
 - b. The bag leak detection system sensor must provide output of relative PM loadings. The Permittee must continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger.)
 - c. The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph d. of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.
 - d. In the initial adjustment of the bag leak detection system, the Permittee must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.
 - e. Following initial adjustment, you must not adjust the averaging period, alarm set point, or alarm delay time without approval from the Division except as provided in paragraph f. of this section.
 - f. Once per quarter, the Permittee may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by Condition 5.4 of this section.
 - g. The Permittee must install the bag leak detection sensor downstream of the baghouse and upstream of any wet scrubber.
 - h. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- 4.4 The Permittee shall operate the activated carbon injection system for Baghouses BH01 and BH05 when raw material being fed to the systems requires carbon injection. The Permittee shall use the most recent Division-approved performance test data to develop operating ranges and limits that will ensure proper operation of the equipment and minimization of emissions. The Permittee shall propose operating ranges, limits and validation of the values

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and shall submit the proposed conditions/values to the Division for approval within 90 days of the completion of the initial performance test required by Condition 6.2.

[391-3-1-.02(2)(e) and 391-3-1-.03(2)(c)]

- 4.5 The Permittee must operate the Bin Vents (Emission Control IDs BV01, BV04, BV02 and BV05) when the respective Silos (Source Codes CS01, CS02, FDS01 and FDS02) are being filled.

[391-3-1-.02(2)(e) and 391-3-1-.03(2)(c)]

- 4.6 The Permittee shall demonstrate compliance with the applicable emission standards specified in 40 CFR 60, Subpart IIII for the Emergency Generators (Source Codes EG01, EG02, and EG03) by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b) for the same model year and maximum engine power. The engines must be installed and configured according to the manufacturer's emission-related specifications. These records shall be maintained in a format suitable for inspection or submittal.

[40 CFR 60.4211(c)]

- 4.7 The Emergency Generators (Source Codes EG01, EG02, and EG03) shall be operated and maintained according to the manufacturer's emission-related written specifications/instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine.

[40 CFR 60.4211(a)]

5. Monitoring

- 5.1 Any continuous monitoring system required by the Division and installed by the Permittee shall be in continuous operation and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Monitoring system response, relating only to calibration checks and zero and span adjustments, shall be measured and recorded during such periods. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during when the system is out of service.

- 5.2 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated pollutants and parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

[391-3-1-.02(6)(b)1 and 40 CFR 60.4209(a)]

- a. A continuous emissions rate monitoring system (CERMS) for the NO_x emission rate from the Top Blown Rotary Converters 1 & 2 including Preheaters (Source Codes TBRC1 and TRBC2), the Lead Tin Alloy Furnace, and the Ladle Treatment Stand (Source Codes LTAF/LTS) at a position post to the air pollution controls location. The average NO_x emission rate shall be calculated using all data points collected but

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not less than four data points equally spaced over each hour.

- b. A continuous emissions rate monitoring system (CERMS) for the NO_x emission rate from the Top Blown Rotary Converters 3 & 4 including Preheaters (Source Codes TBRC3 and TBRC4) at a position post to the air pollution controls location. The average NO_x emission rate shall be calculated using all data points collected but not less than four data points equally spaced over each hour.
- c. The combustion zone temperature of the Post-Combustors (Emission Control IDs COMB1 and COMB2) at a position prior to any substantial heat loss/exchange. The average combustion zone temperature shall be calculated using all data points collected but not less than four data points equally spaced over each hour. The temperature monitoring devices shall have an accuracy of $\pm 2\%$.
- d. Injection rate of activated carbon injected into the Baghouses controlling emissions from the Top Blown Rotary Converters (Emission Control IDs BH01 and BH05). Data shall be recorded once per hour during operation in pounds per hour.
- e. The pH and Circulation Rate of the wet scrubbers controlling acid gas emissions from the Top Blown Rotary Converters (Emission Control IDs SC01 and SC02). Data shall be recorded once per hour during operations.
- f. Urea Flow (gal/min) of the SNCR for the Top Blown Rotary Converters (Emission Control ID SNCR01 and SNCR02). Data shall be collected once per hour during operations.
- g. A device to measure and record the total daily weight of feed/charge to the Top Blown Rotary Converters (Source Codes TBRC1, TBRC2, TBRC3, and TBRC4). As an alternative to a measurement device, the Permittee may use a procedure acceptable to the Division to determine the total weight of feed/charge to each TBRC.
 - i. The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Division for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standard.
 - ii. The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 12 months.

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6. Performance Testing

6.1 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The following provisions shall apply with regard to such tests:

- a. All tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants.
- b. All test results shall be submitted to the Division within sixty (60) days of the completion of testing.
- c. The Permittee shall provide the Division thirty (30) days prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test and shall provide with the notification a test plan in accordance with Division guidelines.
- d. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.

6.2 For the purposes of 40 CFR 63 Subpart FFFFFF, the Permittee must conduct a performance test to demonstrate initial compliance with the PM emissions limit within 180 days after startup¹ and report the results in the notification of compliance status. The Permittee must conduct each PM test according to § 63.7(e)(1) using the test methods and procedures in paragraphs (e)(1) through (5) of this section.

[40 CFR 63.11155(e) and (f)]

- i. Method 1 or 1A (40 CFR Part 60, Appendix A) to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.
- ii. Method 2, 2A, 2C, 2D, 2F, or 2G (40 CFR Part 60, Appendix A) to determine the volumetric flow rate of the stack gas.

¹ Startup is defined as the first heat of the TBRCs when raw material is being fed to the system. TBRC1 & TBRC2 will start up first followed by TBRC3 & TBRC4 at a later date.

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- iii. Method 3, 3A, or 3B (40 CFR Part 60, Appendix A) to determine the dry molecular weight of the stack gas. ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses may be used as an alternative to EPA Method 3B.
 - iv. Method 4 (40 CFR Part 60, Appendix A) to determine the moisture content of the stack gas.
 - v. Method 5 (40 CFR Part 60, Appendix A) to determine the PM concentration for negative pressure baghouses and Method 5D (40 CFR Part 60, Appendix A) for positive pressure baghouses. Performance test must be conducted using the test methods and procedures in 40 CFR 63.11155(e)(a) through (e)(5). The sampling time and volume for each run must be at least 60 minutes and 0.85 dry standard cubic meters (30 dry standard cubic feet). A minimum of three valid test runs are needed to comprise a PM performance test. Subsequent performance tests to demonstrate compliance with the PM emissions limit must be conducted at least once every 5 years.
- 6.3 Within 180 days after startup¹ of Top Blown Rotary Converters (Source Codes TBRC1, TBRC2 and/or TBRC3, TBRC4) the Permittee shall conduct a performance test for hydrogen chloride (HCl), hydrogen fluoride (HF) and the metal hazardous air pollutants (HAPs): antimony, arsenic, cadmium, chromium, cobalt, manganese, nickel, lead, and mercury emissions. Performance tests shall be conducted at the maximum expected feed rate. The Permittee shall use USEPA Test Methods 26A and 29 or alternative methods approved by the Division.
[391-3-1-.03(2)(c)]
- 6.4 Within 180 days after startup¹ of the Top Blown Rotary Converters (Source Codes TBRC1, TBRC2 and/or TBRC3, TBRC4), the Permittee shall conduct performance tests for CO and VOC emissions to determine emission factors in units of pounds per ton of input (lb/ton). Performance tests shall be conducted at the maximum expected feed rate. The Permittee shall use USEPA Test Methods 10 and 25A or alternative methods approved by the Division. Following the initial performance tests, subsequent performance testing on each Top Blown Rotary Converters (Source Codes TBRCs 1 & 2 and/or TBRCs 3 & 4) for CO and VOC emissions shall be conducted within 60 months of the last test.
[391-3-1-.03(2)(c)]
- 6.5 During the performance tests for VOC and CO required by Condition 6.4, the Permittee shall determine the 3-hour average temperature in the Post-Combustors' (Emission Control IDs COMB1 and COMB2) combustion chamber using the device required by Condition 5.2.b. The 3-hour average temperature shall be submitted as part of the performance test report.
[391-3-1-.02(6)(b)1
and 40 CFR 70.6(a)(3)(iii)]

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- 6.6 The Permittee shall install, calibrate, maintain, and operate a continuous emissions rate monitoring system (CERMS) for the measurement of nitrogen oxide (NO_x) emissions in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants, the CERMS is used as an alternative to the initial and subsequent performance testing for NO_x emissions. Within 180 days after startup¹ of the Top Blown Rotary Converters 1 and 2 that includes the Lead Tin Alloy Furnace/Ladle Treatment Stand (Source Codes TBRC1, TBRC2, and LTAF/LTS) and startup of Top Blown Rotary Converters 3 and 4 (Source Codes TBRC3, TBRC4), the Permittee shall conduct a relative accuracy test audit (RATA) on the NO_x CERMS required by Condition 5.2.a. The RATAs shall be performed in accordance with the procedures found in the appropriate performance specifications 2, 4, or 4A in Appendix B of the Division's Procedures for Testing and Monitoring Sources of Air Pollutants.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)]

7. Notification, Reporting and Record Keeping Requirements

- 7.1 The Permittee shall submit written notification of startup to the Division within 15 days after such date. The notification shall be submitted to:
Mr. Sean Taylor
Stationary Source Compliance Program
4244 International Parkway, Suite 120
Atlanta GA 30354
- 7.2 The Permittee must submit a notification of compliance status required by 40 CFR 63.9(h). The notification must include the information specified in 40 CFR 63.11157 (b)(1) through (b)(5) within 60-days of completion of the initial emission test under Condition 6.3.
[40 CFR 63.9(h) and 40 CFR 63.11157]
- 7.3 The Permittee must develop and submit to the Division for approval a Site-specific Monitoring Plan for each installed Bag Leak Detection System. The Permittee must operate and maintain the Bag Leak Detection System according to the site-specific monitoring plan at all times. Each monitoring plan must contain the following items
[40 CFR 63.1115(d)(2)]
- a. Installation of the bag leak detection system;
 - b. Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;
 - c. Operation of the bag leak detection system, including quality assurance procedures;

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- d. How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;
 - e. How the bag leak detection system output will be recorded and stored; and
 - f. Corrective action procedures as specified in Condition 7.4 of this section. In approving the site-specific monitoring plan, the Division may allow the Permittee more than 3 hours to alleviate a specific condition that causes an alarm if the Permittee identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this specific condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.
- 7.4 For each bag leak detection system, the Permittee must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in Condition 7.3.f, the Permittee must alleviate the cause of the alarm within 3 hours of the alarm by taking necessary corrective actions. Corrective actions may include, but are not limited to the following:
[40 CFR 63.1115(d)(3)]
- a. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate emissions;
 - b. Sealing off defective bags or filter media;
 - c. Replacing defective bags or filter media or otherwise repairing the control device;
 - d. Sealing off a defective baghouse compartment;
 - e. Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or
 - f. Shutting down the process producing the particulate emissions.
- 7.5 The Permittee must maintain the following records of information for each bag leak detection system as follows:
[40 CFR 63.11155(d)(4)]
- a. Records of the bag leak detection system output;
 - b. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

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- c. The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of an alarm were initiated, whether procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the alarm was alleviated within 3 hours of the alarm.
- 7.6 The Permittee shall maintain files of all required measurements, including continuous monitoring systems, monitoring devices, and performance testing measurements; all continuous monitoring system or monitoring device calibration checks; and adjustments and maintenance performed on these systems or devices. These files shall be kept in a permanent form suitable for inspection and shall be maintained for a period of at least five (5) years following the date of such measurements, reports, maintenance and records.
[391-3-1-.02(6)(b)1]
 - 7.7 For each calendar month, the Permittee shall maintain the following records. These records shall be available for inspection or submittal to the Division upon request. These records shall be retained for a period of five years following the last date of record.
[391-3-1-.03(2)(c)]
 - a. Records of the process input weight (in tons) of each Top Blown Rotary Converters (Source Codes TBRC1, TBRC2, TBRC3, and TBRC4) determined using the devices required by Condition 5.2.f. These records shall be used to calculate the monthly process input weight (in tons) for the TBRCs. All the calculations shall be kept as part of the record.
 - b. Records of the hours of operation for the Emergency Generators (Source Codes EG01, EG02, and EG03) determined using the device required by Condition 5.2.h. The records shall note emergency and any non-emergency hours of operation and the reason for the non-emergency operation.
 - 7.8 The Permittee shall maintain fuel oil receipts obtained from fuel supplier certifying that the distillate fuel oil fired in Emergency Generators (Source Codes EG01, EG02 and EG03) complies with a maximum sulfur content of 15 ppm (0.0015% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 percent. Records shall be maintained for a period of five (5) years in a format suitable for inspection by or submission to the Division.
[40 CFR 60.4207]

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7.9 For each calendar month, the Permittee shall determine the monthly total emissions (in tons) of NO_x, CO, and VOC emitted from the entire facility using the following procedures:
[391-3-1-.03(2)(c)]

a. For NO_x:

$$NO_x = \left\{ \frac{\left(\sum E_{EP1A,NO_x} + \sum E_{EP1B,NO_x} + [(NG_{LH} + NG_{SHF} + NG_L) \times EF_{NG,NO_x}] + \right) + [(HR_{EG01} \times HPE_{G01} + HR_{EG02} \times HPE_{G02} + HR_{EG03} \times HPE_{G03}) \times EF_{IC,NO_x}]}{2,000 \frac{lb}{ton}} \right\}$$

Where,

E_{EP1A,NO_x} = Emissions of NO_x in pounds from the Top Blown Rotary Converters including Preheaters and the Lead Tin Alloy Furnace/Ladle Treatment Stand (Source Codes TBRCs 1 & 2 and LTAF/LTS) for every hour in the calendar month as measured by the NO_x monitoring devices located at the emission source.

E_{EP1B,NO_x} = Emissions of NO_x in pounds from the Top Blown Rotary Converters including Preheaters (Source Codes TBRCs 3 & 4) for every hour in the calendar month as measured by the NO_x monitoring devices located at emission source.

NG_{SHF} = Monthly natural gas combustion in the Slag Holding Furnace/Copper Casting Unit/Dry Slag Granulation (Source Codes SHF/CCU/DSG) in MMft³.

NG_L = Monthly natural gas combustion in the Launderers (Source Code LNDR) in MMft³.

NG_{LH} = Monthly natural gas combustion in the Ladle Heaters (Source Code LH) in MMft³.

EF_{NG,NO_x} = AP-42 emission factor for NO_x from natural gas fuel combustion in lb NO_x/MMft³.

HR_{EG01} = Total monthly hours of operation of the emergency generator (Source Code EG01) recorded in accordance with Condition 5.2.h.

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HP_{EG01} = Name plate rating of the emergency generator (Source Code EG01) in hp.

HR_{EG02} = Total monthly hours of operation of the emergency generator (Source Code EG02) recorded in accordance with Condition 5.2.h.

HP_{EG02} = Name plate rating of the emergency generator (Source Code EG02) in hp.

HR_{EG03} = Total monthly hours of operation of the emergency generator (Source Code EG03) recorded in accordance with Condition 5.2.h.

HP_{EG03} = Name plate rating of the emergency generator (Source Code EG03) in hp.

$EF_{IC,NOx}$ = NSPS derived emission factor for diesel fuel combustion in an internal combustion engine in lb/hp-hr.

b. For CO:

$$CO = \left\{ \frac{EF_{BH01,CO} \times P_{TBRC1\&2} + EF_{BH05,CO} \times P_{TBRC3\&4} + [(NG_{LH} + NG_{SHF} + NG_L + NGLTAF/LTS) \times EF_{NG,CO}] + [(HR_{EG01} \times HP_{EG01} + HR_{EG02} \times HP_{EG02} + HR_{EG03} \times HP_{EG03}) \times EF_{IC,CO}]}{2,000 \frac{lb}{ton}} \right\}$$

Where,

$EF_{BH01,CO}$ = Emission factor of CO in lb/ton from the Top Blown Rotary Converters including Preheaters (Source Codes TBRCs 1 & 2) as determined in accordance with Condition 6.4.

$P_{TBRC1\&2}$ = Monthly throughput for TBRCs 1 & 2 as required by Condition 5.2.f.

$EF_{BH05,CO}$ = Emission factor of CO in lb/ton from the Top Blown Rotary Converters (Source Codes TBRCs 3 & 4) as determined in accordance with Condition 6.4.

$P_{TBRC3\&4}$ = Monthly throughput for Top Blown Rotary Converters (Source Code TBRCs 3 & 4) as measured by Condition 5.2.f.

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- NG_{SHF} = Monthly natural gas combustion in the Slag Holding Furnace/Copper Casing Unit/Dry Slag Granulation (Source Codes SHF/CCU/DSG) in MMft³.
- NG_{LH} = Monthly natural gas combustion in the Ladle Heaters (Source Code LH) in MMft³.
- NG_L = Monthly natural gas combustion in the Launderers (Source Code Launderers) in MMft³.
- NG_{LTAFLTS} = Monthly natural gas combustion in the Lead Tin alloy furnace and Ladle Treatment Stand (Source Code LTAFLTS) in MMft³.
- EF_{NG,CO} = AP-42 emission factor for CO from natural gas fuel combustion in lb CO/MMft³.
- HR_{EG01} = Total monthly hours of operation of the emergency generator (Source Code EG01) recorded in accordance with Condition 5.2.h.
- HP_{EG01} = Name plate rating of the emergency generator (Source Code EG01) in hp.
- HR_{EG02} = Total monthly hours of operation of the emergency generator (Source Code EG02) recorded in accordance with Condition 5.2.h.
- HP_{EG02} = Name plate rating of the emergency generator (Source Code EG02) in hp.
- HR_{EG03} = Total monthly hours of operation of the emergency generator (Source Code EG03) recorded in accordance with Condition 5.2.h.
- HP_{EG03} = Name plate rating of the emergency generator (Source Code EG03) in hp.
- EF_{IC,CO} = NSPS derived emission factor for diesel fuel combustion in an internal combustion engine (lb/hp-hr).

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c. For VOC:

$$VOC = \frac{EF_{BH01,VOC} \times P_{TBRC1\&2} + EF_{BH02,VOC} \times P_{TBRC3\&4} + [(NG_{LH} + NG_{SHF} + NG_L + NGLTAF/LTS) \times EF_{NG,VOC}] + [(HR_{EG01} \times HP_{EG01} + HR_{EG02} \times HP_{EG02} + HR_{EG03} \times HP_{EG03}) \times EF_{IC,VOC}]}{2,000 \frac{lb}{ton}}$$

Where,

$EF_{BH01,VOC}$ = Emission factor of VOC in lb/ton from the Top Blown Rotary Converters (Source Codes TBRCs 1 & 2) as determined in accordance with Condition 6.4.

$P_{TBRC1\&2}$ = Monthly throughput for TBRCs 1 & 2 as measured by Condition 5.2.f.

$EF_{BH05,VOC}$ = Emission factor of VOC in lb/ton from the Top Blown Rotary Converters (Source Codes TBRCs 3 & 4) as determined in accordance with Condition 6.4.

$P_{TBRC3\&4}$ = Monthly throughput for the Top Blown Rotary Converters (Source Code (TBRCs 3 & 4). As measured by Condition 5.2.f.

NG_{SHF} = Monthly natural gas combustion in the Slag Holding Furnace/Copper Casing Unit/Dry Slag Granulation (Source Codes SHF/CCU/DSG) in MMft³.

NG_{LH} = Monthly natural gas combustion in the Ladle Heaters (Source Code LH) in MMft³

NG_L = Monthly natural gas combustion in the Launderers (Source Code Launderers) in MMft³.

$NG_{LTAFLTS}$ = Monthly natural gas combustion in the Lead Tin alloy furnace and Ladle Treatment Stand (Source Code LTAFLTS) in MMft³.

$EF_{NG,VOC}$ = AP-42 emission factor for VOC from natural gas fuel combustion in lb VOC/MMft³.

HR_{EG01} = Total monthly hours of operation of the emergency generator (Source Code EG01) recorded in accordance with Condition 5.2.h.

HP_{EG01} = Name plate rating of the emergency generator (Source Code EG01) in hp.

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- HR_{EG02} = Total monthly hours of operation of the emergency generator (Source Code EG02) recorded in accordance with Condition 5.2.h.
- HP_{EG02} = Name plate rating of the emergency generator (Source Code EG02) in hp.
- HR_{EG03} = Total monthly hours of operation of the emergency generator (Source Code EG03) recorded in accordance with Condition 5.2.h.
- HP_{EG03} = Name plate rating of the emergency generator (Source Code EG03) in hp.
- EF_{IC,VOC} = NSPS derived emission factor for diesel fuel combustion in an internal combustion engine (lb/hp-hr).

7.10 The Permittee shall use the monthly records required in Condition 7.9 to calculate the twelve-month rolling total of NO_x, CO and VOC emissions from the entire facility for each calendar month. All the calculations shall be kept as part of the records required in Condition 7.6 and 7.7. The Permittee shall notify the Division in writing within 15 days if any of the twelve-month rolling totals equals or exceeds the emission limits in Condition 2.1.

7.11 The Permittee shall submit a report to the Division, in accordance with the requirements of Condition 7.12, for each semiannual reporting period in which deviations have occurred. Deviations are defined as follows:

[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6 (a)(3)(ii)(B)]

- a. Any 12-month consecutive period of operation during which the NO_x, CO, or VOC emissions determined in Condition 7.10 exceeds the emission limit in Condition 2.1.
- b. Any three-hour period of operation during which the average combustion temperature measured using the device required by Condition 5.2.b is more than 50°F (28°C) less than the minimum temperature established in Condition 4.2.

7.12 The Permittee shall submit a written report of deviations for each semiannual period. The report shall cover each semiannual period ending June 30 and December 31 of each year, and shall be postmarked by August 29 and February 28, respectively. The report shall be kept as part of the records required by Condition 7.7 and shall contain as a minimum the following:

- a. The nature and cause of the deviation, the time and date of occurrences, and any initial and final corrective action taken.

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- b. A summary of any days for which any of the required operation and maintenance surveillance checks were not made and the reason for such failure to perform the surveillance.
- c. Any corrective actions taken to prevent any further deviations.

8. Special Conditions

- 8.1 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.
- 8.2 Within twelve months of startup of the secondary smelter operations (Source Code TBRC1 and TBRC2), the Permittee is required to submit a complete application to the Division for a Part 70 (Title V) permit.
[40 CFR 63.11153(d)]
- 8.3 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Application & Annual Permit Fees."

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ATTACHMENT A

Emission Units		Air Pollution Control Devices	
ID No.	Name/Description	ID No.	Description
TBRC1 TBRC2	Top Blown Rotary Converter – 1&2 and Operational Heaters and Preheaters [81.88 MMBtu/hr] 12 m ³ rotary tilt-able furnace for smelting copper	BH01 SC01 COMB1 SNCR1 QC01	Baghouse Scrubber [6.82 MMBtu/hr] Post Combustor Selective Non-Catalytic Reduction Quench
SBH01	Secondary Baghouse controls emissions leaving Smelting Canopy 01, Secondary Hoods TBRC1 and TBRC2, Sampling and Material handling	BH03	Baghouse
LH	Ladle Heaters		
TBRC3 TBRC4	Top Blown Rotary Converter – 3&4 and Operational Heaters and Preheaters [81.88 MMBtu/hr] 12 m ³ rotary tilt-able furnace for smelting copper	BH05 SC02 COMB2 SNCR2 QC02	Baghouse Scrubber [6.82 MMBtu/hr] Post Combustor Selective Non-Catalytic Reduction Quench
SBH02	Secondary Baghouse controls emissions leaving Smelting Canopy 02, Secondary Hoods TBRC3 and TBRC4	BH06	Baghouse
LTAF/LTS	5.5 m ³ Lead Tin Alloy Furnace, Heater and Ladle Treatment Stand	BH02	Baghouse
SHF/CCU/DSG	37 m ³ Slag Holding Furnace including Copper Casting Unit and Slag Granulation	BH04	Baghouse
LNDR	Launders		
RMS	Outside Material Storage and Handling	NA	None
FDS01	80 m ³ Flue Dust Silo with Bin Vent for BH01 Flue Dust	BV02	Filter
FDS02	80 m ³ Flue Dust Silo with Bin Vent for BH05 Flue Dust	BV05	Filter
CS01	30 m ³ Carbon Silo with Bin Vent for use in BH01	BV01	Filter
CS02	30 m ³ Carbon Silo with Bin Vent for use in BH05	BV04	Filter
EG01	2,720 hp Diesel Fired Emergency Generator	NA	None
EG02	2,720 hp Diesel Fired Emergency Generator	NA	None
EG03	1,360 hp Diesel Fired Emergency Generator	NA	None

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Emission Units		Air Pollution Control Devices	
ID No.	Name/Description	ID No.	Description
RV01-RV06	6 Roof Ventilations (filtered) to Exchange Air in Bunker Bay of the Melt-shops	NA	None