STATE OF TENNESSEE
AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243

ADMINISTRATIVE AMENDMENT 4 TO

OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations (TAPCR). The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Date Issued: January 11, 2017

Date Amended (AA4): December 9, 2021

Date Expires: January 10, 2022

Permit Number:

570857

Issued To:

Heraeus Metal Processing, LLC

Installation Address:
1975 Knoxville Highway
Wartburg

Installation Description: **Precious metals reclamation facility**

65-0049-01(**MM4, AA1**): Eight (8) roasting ovens, one (1) chamber furnace, one (1) burning chamber, and two (2) afterburners.
65-0049-04: Six (6) ball mills.
65-0049-06: Crucible Furnace.
65-0049-09(**MM4**): Rotary Furnace.
65-0049-11: Emergency Generator.
65-0049-12(**MM3**): Six (6) electric furnaces, Eight (8) cooling chambers, and Two (2) tray furnaces with one afterburner; Milling, polishing, and transfer operations; and Three (3) auxiliary furnaces with baghouse control.
65-0049-13**(AA2, AA4)**: One (1) Rhodium-Oil Furnace with Baghouse Control.

Facility ID: 65-0049

Renewal Application Due Date:

Between April 16, 2021 and July 15, 2021

Primary SIC: 33

Information Relied Upon:

Renewal Application dated September 29, 2015
Additional information dated January 19, 2016, March 14, 2016, & May 15, 2016
Minor Modification Application Dated August 1, 2014(Source 12)
Minor Modification Application Dated May 22, 2017 (Sources 04, 06, & 09)
Minor Modification Application Dated May 22, 2017 (Sources 04, 06, & 09)
Minor Modification Application Dated October 29, 2018 (Source 13)
Modification Applications Dated August 16, 2019 & October 31, 2019 (Source 01)
Administrative Amendment Letter Dated February 6, 2020 (Source 01)
Administrative Amendment Letter Dated November 24, 2020 (Source 13)
Administrative Amendment Letter Dated June 22, 2021 (Source 01)
Administrative Amendment Letter Dated October 27, 2021 (Source 13)

(continued on the next page)

Nicholas W. Conley
TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

POST AT INSTALLATION ADDRESS

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END OF AMENDED PERMIT NUMBER 570857

SECTION A
GENERAL PERMIT CONDITIONS

A permit issued under the provisions of paragraph TAPCR 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

A1. **Definitions.** Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

TAPCR 1200-03

A2. **Compliance requirement.** All terms and conditions in a permit issued pursuant to paragraph TAPCR 1200-03-09-.02(11) including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act. The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

TAPCR 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

A3. **Need to halt or reduce activity.** The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations.

TAPCR 1200-03-09-.02(11)(e)1(vi)(II)

A4. **The permit.** The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

TAPCR 1200-03-09-.02(11)(e)1(vi)(III)

A5. **Property rights.** The permit does not convey any property rights of any sort, or any exclusive privilege.

TAPCR 1200-03-09-.02(11)(e)1(vi)(IV)

A6. **Submittal of requested information.** The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

TAPCR 1200-03-09-.02(11)(e)1(vi)(V)

A7. **Severability clause.** The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

TAPCR 1200-03-09.02(11)(e)1(v)

A8(MM2). **Fee payment.**

(a) The permittee shall pay an annual Title V emission fee based upon the responsible official's choice of actual emissions, allowable emissions, or a combination of actual and allowable emissions; and on the responsible official's choice of annual accounting period. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual

or allowable based emission fees. A Title V annual emission fee will not be charged for emissions in excess of the cap. Title V annual emission fees will not be charged for carbon monoxide or for greenhouse gas pollutants solely because they are greenhouse gases.

(b) Title V sources shall pay allowable based emission fees until the beginning of the next annual accounting period following receipt of their initial Title V operating permit. At that time, the permittee shall begin paying their Title V fee based upon their choice of actual or allowable based fees, or mixed actual and allowable based fees. Once permitted, the Responsible Official may revise their existing fee choice by submitting a written request to the Division no later than December 31 of the annual accounting period for which the fee is due.

(c) When paying annual Title V emission fees, the permittee shall comply with all provisions of 1200-03-26-.02 and 1200-03-09-.02(11) applicable to such fees.

(d) Where more than one (1) allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.

1. Sources that are subject to federally promulgated hazardous air pollutant under 40 CFR 60, 61, or 63 will place such regulated emissions in the regulated hazardous air pollutant (HAP) category.

2. A category of miscellaneous HAPs shall be used for hazardous air pollutants listed at part 1200-03-26-.02(2)(i)12 that are not subject to federally promulgated hazardous air pollutant standards under 40 CFR 60, 61, or 63.

3. HAPs that are also in the family of volatile organic compounds, particulate matter, or PM_{10} shall not be placed in either the regulated HAP category or miscellaneous HAP category.

4. Sources that are subject to a provision of chapter 1200-03-16 New Source Performance Standards (NSPS) or chapter 0400-30-39 Standards of Performance for New Stationary Sources for pollutants that are neither particulate matter, PM_{10}, sulfur dioxide (SO_2), volatile organic compounds (VOC), nitrogen oxides (NO_x), or hazardous air pollutants (HAPs) will place such regulated emissions in an NSPS pollutant category.

5. The regulated HAP category, the miscellaneous HAP category, and the NSPS pollutant category are each subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

6. Major sources that wish to pay annual emission fees for PM_{10} on an allowable emission basis may do so if they have a specific PM_{10} allowable emission standard. If a major source has a total particulate emission standard but wishes to pay annual emission fees on an actual PM_{10} emission basis, it may do so if the PM_{10} actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM_{10} emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM_{10} emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) shall also apply to PM_{10} emissions.

A9. **Permit revision not required.** A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

TAPCR 1200-03-09-.02(11)(e)1(viii)

A10. **Inspection and entry.** Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or his authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:

(a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

(d) As authorized by the Clean Air Act and Chapter 1200-03-10 of TAPCR, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, Division TAPCR 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

TAPCR 1200-03-09-.02(11)(e)3.(ii)

A11. **Permit shield.**

(a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:

1. Such applicable requirements are included and are specifically identified in the permit; or

2. The Technical Secretary, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

(b) Nothing in this permit shall alter or affect the following:

1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68-201-109 (emergency orders) including the authority of the Governor under the section;

2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or

4. The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.

(c) Permit shield is granted to the permittee.

TAPCR 1200-03-09-.02(11)(e)6

A12. Permit renewal and expiration.

(a) An application for permit renewal must be submitted at least 180 days, but no more than 270 days prior to the expiration of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted.

(b) Provided that the permittee submits a timely and complete application for permit renewal the source will not be considered to be operating without a permit until the Technical Secretary takes final action on the permit application, except as otherwise noted in paragraph TAPCR 1200-03-09-.02(11).

(c) This permit, its shield provided in Condition A11, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)2 and 3, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

A13. Reopening for cause.

(a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:

1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to TAPCR 1200-03-09-.02(11)(a)2.

2. Additional requirements become applicable to an affected source under the acid rain program.

3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.

(c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68-201-109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.

(d) If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:

1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90-day time period.

2. EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.

3. If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under Condition A13 (b) and Condition A13 (c).

4. If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted pursuant to Condition A13(d),

he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

TAPCR 1200-03-09-.02(11)(f)6 and 7.

A14. **Permit transference.** An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:

(a) Transfer of ownership permit application is filed consistent with the provisions of TAPCR 1200-03-09-.03(6), and

(b) written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

A15. **Air pollution alert.** When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in TAPCR 1200-03-09-.03(1) and TAPCR 1200-03-15-.03

A16. **Construction permit required.** Except as exempted in TAPCR 1200-03-09-.04, or excluded in subparagraph TAPCR 1200-03-02-.01(1)(aa) or subparagraph TAPCR 1200-03-02-.01(1)(cc), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

TAPCR 1200-03-09-.01(1)(a)

A17. **Notification of changes.** The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.

(a) change in air pollution control equipment

(b) change in stack height or diameter

(c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

TAPCR 1200-03-09-.02(7)

A18. **Schedule of compliance.** The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis. If the permittee is not in compliance the permittee must submit a schedule for coming into compliance which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

TAPCR 1200-03-09-.02(11)(d)3 and 40 CFR Part 70.5(c)

A19. **Title VI.**

(a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.

2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.

3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.

(b) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

(c) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.

A20. **112 (r).** The permittee shall comply with the requirement to submit to the Administrator or designated State Agency a risk management plan, including a registration that reflects all covered processes, by June 21, 1999, if the permittee's facility is required pursuant to 40 CFR, 68, to submit such a plan.

SECTION B

GENERAL CONDITIONS for MONITORING, REPORTING, and ENFORCEMENT

B1. **Recordkeeping.** Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.

(a) Where applicable, records of required monitoring information include the following:

1. The date, place as defined in the permit, and time of sampling or measurements;
2. The date(s) analyses were performed;
3. The company or entity that performed the analysis;
4. The analytical techniques or methods used;
5. The results of such analyses; and
6. The operating conditions as existing at the time of sampling or measurement.

(b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B2. **Retention of monitoring data.** The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

TAPCR 1200-03-09-.02(11)(e)1(iii)(II)II

B3. **Reporting.** Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B4. **Certification.** Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

TAPCR 1200-03-09-.02(11)(d)4

B5. **Annual compliance certification.** The permittee shall submit annually compliance certifications with the terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

(a) The identification of each term or condition of the permit that is the basis of the certification;

(b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;

(c) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in **B5(b)** above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an *excursion or **exceedance as defined below occurred; and

(d) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol.79, No.144, July 28, 2014, pages 43661 through 43667.

B6. **Submission of compliance certification.** The compliance certification shall be submitted to:

The Tennessee Department of Environment and Conservation Environmental Field Office specified in Section E of this permit	and	Air and EPCRA Enforcement Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303

TAPCR 1200-03-09-.02(11)(e)3(v)(IV)

B7. **Emergency provisions.** An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology-based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An emergency occurred and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.

2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.

3. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in rule TAPCR 1200-03-20-.03. For the purposes of this condition, "emergency" shall be substituted for "malfunction(s)" in rule TAPCR 1200-03-20-.03 to determine the relevant notification threshold. The notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding the permittee seeking to establish the occurrence of an emergency has the burden of proof.

(c) The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in Division TAPCR 1200-03 or other applicable requirement.

TAPCR 1200-03-09-.02(11)(e)7

B8. **Excess emissions reporting.**

(a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in Division TAPCR 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.

(b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.

(c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division TAPCR 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than twenty-four (24) hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:

1. Stack or emission point involved
2. Time malfunction, startup, or shutdown began and/or when first noticed
3. Type of malfunction and/or reason for shutdown
4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation
5. The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring, continuous emission(s) monitoring collection satisfies the above log keeping requirement.

TAPCR 1200-03-20-.03 and .04

B9. **Malfunctions, startups and shutdowns - reasonable measures required.** The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).

TAPCR 1200-03-20-.02

B10. **Reserved.**

B11. **Report required upon the issuance of a notice of violation for excess emissions.** The permittee must submit within twenty (20) days after receipt of the notice of violation, the data shown below to assist the Technical Secretary in deciding whether to excuse or validate the violation. If this data has previously been available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same twenty (20) day time period. The minimum data requirements are:

(a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
(b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
(c) The time and duration of the emissions;
(d) The nature and cause of such emissions;
(e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
(f) The steps taken to limit the excess emissions during the occurrence reported, and
(g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the twenty (20) day period specified shall preclude the admissibility of the data for consideration of excusal for malfunctions.

TAPCR 1200-03-20-.06(2), (3) and (4)

SECTION C
PERMIT CHANGES

C1. **Operational flexibility changes.** The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:

(a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter TAPCR 1200-03-30.

(b) The change cannot be a modification under any provision of Title I of the federal Act or Division TAPCR 1200-03.

(c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.

(d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule TAPCR 1200-03-09-.04.

(e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.

(f) The change shall not qualify for a permit shield under the provisions of part TAPCR 1200-03-09-.02(11)(e)6.

(g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

TAPCR 1200-03-09-.02(11)(a)4 (ii)

C2. **Section 502(b)(10) changes.**

(a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or Division TAPCR 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7-day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of TAPCR 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.

(b) The written notification must be signed by a facility Title V responsible official and include the following:

1. a brief description of the change within the permitted facility;

2. the date on which the change will occur;

3. a declaration and quantification of any change in emissions;

4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and

5. a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.

(c) The permit shield provisions of TAPCR 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

TAPCR 1200-03-09-.02(11)(a)4 (i)

C3. **Administrative amendment.**

(a) Administrative permit amendments to this permit shall be in accordance with TAPCR 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.

(b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of TAPCR 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this condition which meet the relevant requirements of TAPCR 1200-03-09-.02(11)(e), TAPCR 1200-03-09-.02(11)(f) and TAPCR 1200-03-09-.02(11)(g) for significant permit modifications.

(c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)4

C4. **Minor permit modifications.**

(a) The permittee may submit an application for a minor permit modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(ii).

(b) The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.

(c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

(d) Minor permit modifications do not qualify for a permit shield.

TAPCR 1200-03-09-.02(11)(f)5(ii)

C5. Significant permit modifications.

(a) The permittee may submit an application for a significant modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(iv).

(b) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)5(iv)

C6. New construction or modifications.

Future construction at this facility that is subject to the provisions of TAPCR 1200-03-09-.01 shall be governed by the following:

(a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.

(b) Sources desiring the permit shield shall choose the administrative amendment route of TAPCR 1200-03-09-.02(11)(f)4 or the significant modification route of TAPCR 1200-03-09-.02(11)(f)5(iv).

(c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of TAPCR 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of TAPCR 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

TAPCR 1200-03-09-.02(11)(d)1(i)(V)

SECTION D
GENERAL APPLICABLE REQUIREMENTS

D1. **Visible emissions.** With the exception of air emission sources exempt from the requirements of TAPCR 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1)hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty (20) percent (6-minute average) except for one six minute period per one (1) hour of not more than forty (40) percent opacity. Sources constructed or modified after July 7, 1992 shall utilize 6-minute averaging.

Consistent with the requirements of TAPCR 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under TAPCR 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or his representative upon his request.

TAPCR 1200-03-05-.01(1), TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.02(1)

D2. **General provisions and applicability for non-process gaseous emissions.** Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

TAPCR 1200-03-06-.03(2)

D3. **Non-process emission standards.** The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in TAPCR 1200-03-06.

D4. **General provisions and applicability for process gaseous emissions.** Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

TAPCR 1200-03-07-.07(2)

D5. **Particulate emissions from process emission sources.** The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in TAPCR 1200-03-07.

D6. **Sulfur dioxide emission standards.** The permittee shall not cause, suffer, allow, or permit Sulfur dioxide emissions from process and non-process sources in excess of the standards in TAPCR 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.

D7. **Fugitive Dust.**

(a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;

2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces which can create airborne dusts;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

(b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in TAPCR 1200-03-20.

TAPCR 1200-03-08

D8. **Open burning.** The permittee shall comply with the TAPCR 1200-03-04 for all open burning activities at the facility.

TAPCR 1200-03-04

D9. **Asbestos.** Where applicable, the permittee shall comply with the requirements of TAPCR 1200-03-11-.02(2)(d) when conducting any renovation or demolition activities at the facility.

TAPCR 1200-03-11-.02(2)(d) and 40 CFR, Part 61

D10. **Annual certification of compliance.** The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are not subject to source-specific applicable requirements contained in State of Tennessee and U.S. EPA regulations. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)1 and compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit compliance certification for these conditions annually.

D11(MM3). Emission Standards for Hazardous Air Pollutants. When applicable, the permittee shall comply with the TAPCR 0400-30-38 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-38

D12(MM3). Standards of Performance for New Stationary Sources. When applicable, the permittee shall comply with the TAPCR 0400-30-39 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-39

D13(MM3). Gasoline Dispensing Facilities. When applicable, the permittee shall comply with the TAPCR 1200-03-18-.24 for all emission sources subject to a requirement contained therein.

D14(MM3). Internal Combustion Engines.

(a) All stationary reciprocating internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-38-.01.
(b) All stationary compression ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.01.
(c) All stationary spark ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.02.

TAPCR 0400-30-38 and 39

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

65-0049	**Facility Description:**	Precious metals reclamation operation. Extraction of precious metals from various products containing precious metals through thermal reduction, sizing, screening, blending, sampling, and melting.

Conditions E1 through E3 apply to all sources in Section E of this permit unless otherwise noted.

E1(MM3, AA4). Fee payment

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 65-0049

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	**83.95(MM3)**	**AEAR**	**Includes all fee emissions.**
PM_{10}	**N/A**	**N/A**	
SO_2	**33.79(MM3)**	**AEAR**	**Includes all fee emissions.**
VOC	**59.47(MM3)**	**AEAR**	**Includes all fee emissions.**
NO_X	**33.84(MM3)**	**AEAR**	**Includes all fee emissions.**
CATEGORY OF MISCELLANEOUS HAZARDOUS AIR POLLUTANTS (HAPs WITHOUT A STANDARD) *			
VOC FAMILY GROUP	**24.9(MM3)**	**AEAR**	**Included in VOC emissions above**
NON-VOC GASEOUS GROUP	**N/A**	**N/A**	
PM FAMILY GROUP	**N/A**	**N/A**	
CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAPs WITH A STANDARD) **			
VOC FAMILY GROUP	**N/A**	**N/A**	
NON-VOC GASEOUS GROUP	**N/A**	**N/A**	
PM FAMILY GROUP	**N/A**	**N/A**	
CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE***			
EACH NSPS POLLUTANT NOT LISTED ABOVE	**N/A**	**N/A**	

NOTES

AAP The **Annual Accounting Period** (**AAP**) is a 12 consecutive month period that **either (a) begins each July 1st and ends June 30th of the following year when fees are paid on a fiscal year basis, or (b) begins January 1st and ends December 31st of the same year when paying on a calendar year basis.** The **Annual Accounting Period** at the time of administrative amendment 1 issuance **began July 1, 2019 and ends June 30, 2020.** The next Annual Accounting Period begins **July 1, 2020** and ends **June 30, 2021** unless a request to change the annual accounting period is submitted by the responsible official as required by subparagraph 1200-03-26-.02(9)(b) of the TAPCR and approved by the Technical Secretary**.** If the permittee wishes to revise their annual accounting period or their annual emission fee basis as allowed by subparagraph 1200-03-26-.02(9)(b) of the TAPCR, the responsible official must submit the request to the Division in writing on or before December 31 of the annual accounting period for which the fee is due. If a change in fee basis from allowable emissions to actual emissions for any pollutant is requested, the request from the responsible official must include the methods that will be used to determine actual emissions. Changes in fee bases must be made using the Title V Fee Selection form, form number APC 36 (CN-1583), included as an attachment to this permit and available on the Division of Air Pollution Control's website.

N/A **N/A** indicates that no emissions are specified for fee computation.

AEAR If the permittee is paying annual emission fees on an actual emissions basis, **AEAR** indicates that an **A**ctual **E**missions **A**nalysis is **R**equired to determine the actual emissions of:

(1) **each regulated pollutant** (Particulate matter, SO_2, VOC, NO_X and so forth. See TAPCR 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
(2) **each pollutant group** (VOC Family, Non-VOC Gaseous, and Particulate Family),
(3) the **Miscellaneous HAP Category,**
(4) the **Specific HAP Category**, and
(5) the **NSPS Category**

under consideration during the **Annual Accounting Period**.

***** **Category of Miscellaneous HAP (HAP Without A Standard):** This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the **VOC Family** group**, the Non-VOC Gaseous** group**,** or the **Particulate (PM) Family** group**. For fee computation**, the **Miscellaneous HAP Category** is subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

****** **Category of Specific HAP (HAP With A Standard):** This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31. Each individual hazardous air pollutant is classified into one of three groups, the **VOC Family** group**, the Non-VOC Gaseous** group**,** or the **Particulate (PM) Family** group**. For fee computation**, each individual hazardous air pollutant of the **Specific HAP Category** is subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

******* **Category of NSPS Pollutants Not Listed Above:** This category is made-up of each **N**ew **S**ource **P**erformance **S**tandard (**NSPS**) pollutant whose emissions are not included in the **PM**, **SO_2, VOC** or **NO_X** emissions from each source in this permit. **For fee computation**, each **NSPS pollutant not listed above** is subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

END NOTES

The permittee shall:

(1) Pay Title V **annual emission fees**, on the emissions and year bases requested by the responsible official and approved by the Technical Secretary, for each annual accounting period (AAP) by the payment deadline(s) established in TAPCR 1200-03-26-.02(9)(g). Fees may be paid on an **actual**, **allowable**, or **mixed** emissions basis; and on either a **state fiscal year** or a **calendar year**, provided the requirements of TAPCR 1200-03-26-.02(9)(b) are met. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8).

(2) Sources paying annual emissions fees on an allowable emissions basis: pay annual allowable based emission fees for each annual accounting period no later than April 1 of each year pursuant to TAPCR 1200-03-26-.02(9)(d).

(3) Sources paying annual emissions fees on an actual emissions basis: prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
(a) the completed **Fee Emissions Summary Table**,
(b) each **actual emissions analysis** required**,** and
(c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the annual fee basis approved by the Technical Secretary (a state fiscal year [July 1 through June 30] or a calendar year [January 1 through December 31]). These records shall be used to complete the **actual emissions analyses** required by the above **Fee Emissions Summary Table**.

(4) Sources paying annual emissions fees on a mixed emissions basis: for all pollutants and all sources for which the permittee has chosen an actual emissions basis, prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
(a) the completed **Fee Emissions Summary Table**,
(b) each **actual emissions analysis** required**,** and

(c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the fee bases approved by the Technical Secretary (payment on an actual or mixed emissions basis) and payment on a state fiscal year (July 1 through June 30) or a calendar year (January 1 through December 31). These records shall be used to complete the **actual emissions analysis**.

For all pollutants and all sources for which the permittee has chosen an allowable emissions basis, pay allowable based emission fees pursuant to TAPCR 1200-03-26-.02(9)(d).

(5) When paying on an actual or mixed emissions basis, submit the **actual emissions analyses** at the time the fees are paid in full.

The annual emission fee due dates are specified in TAPCR 1200-03-26-.02(9)(g) and are dependent on the Responsible Official's choice of fee bases as described above. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

Payment of the fee due and the actual emissions analysis (if required) shall be submitted to The Technical Secretary at the following address:

Payment of Fee to:
The Tennessee Department of
Environment and Conservation
Division of Fiscal Services
Consolidated Fee Section – APC
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 10th Floor
Nashville, Tennessee 37243

and

Actual Emissions Analyses to:
The Tennessee Department of
Environment and Conservation
Division of Air Pollution Control
Emission Inventory Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, Tennessee 37243
or
An electronic copy (PDF) of actual emissions analysis can also be submitted to: apc.inventory@tn.gov

E2(AA4). Reporting requirements

(a) **Semiannual reports.** Semiannual reports shall cover the six-month periods from **April 1** to **September 30** and **October 1** to **March 31** and shall be submitted within 60 days after the end of each six-month period. Subsequent reports shall be submitted within 60 days after the end of each 6-month period following the first report. The first semiannual report following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
570857	February 22, 2019	March 31, 2019
New permit #	Issuance Date of new permit (with year)	end of SAR period (with year)

These semiannual reports shall include:

(1) Any monitoring and recordkeeping required by Conditions E3-6(MM3), E4-3, E4-4(MM4, AA1), E4-5(MM1), E4-8, E5-1, E5-2(MM2), E6-3, E6-4(MM2), E7-2, E7-3, E7-4(MM2), E7-5(MM2), E8-1, E9-3(MM3), E9-4(MM3), E9-5(MM3), E9-11(MM3), E13-3(MM3), E13-4(MM3, AA4), and E13-5(MM3) of this permit. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.

(2) The visible emission evaluation readings from Condition E3-2 of this permit, if required. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.

(3) Identification of all instances of deviations from **ALL PERMIT REQUIREMENTS**.

(4) The day(s) that the source(s) does not operate shall be noted in the recordkeeping section for each source.

These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.

TAPCR 1200-03-09-.02(11)(e)1.(iii)

(b) **Annual compliance certification.** The permittee shall submit annually compliance certifications with each term or condition contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

(1) The identification of each term or condition of the permit that is the basis of the certification;

(2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;

(3) The status of compliance with each term or condition of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in E2(b)2 above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and

(4) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

Annual compliance certifications shall cover the 12-month period from **April 1** of each calendar year to **March 31** of the following calendar year and shall be submitted within 60 days after the end of each 12-month period. The first annual compliance certification following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
570857	February 22, 2019	March 31, 2019
New permit #	Issuance Date of new permit (with year)	end of ACC period (with year)

These certifications shall be submitted to: Tennessee Division of Air Pollution Control TN APCD and EPA

Division of Air Pollution Control
ATTN: Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, Tennessee 37921
or
by email to APC.KnoxEFO@tn.gov

and

Air Enforcement Branch
US EPA Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667
TAPCR 1200-03-09-.02(11)(e)3.(v)

(c) **Retention of Records** All records required by any condition in Section E of this permit must be retained for a period of not less than five years. Additionally, these records shall be kept available for inspection by the Technical Secretary or a Division representative.

TAPCR 1200-03-09-.02(11)(e)1.(iii)(II)II

Note:
Public Notices, or Proposed Title V Permits
When you are sending Public Notices, or Draft or Proposed Title V permits to EPA, the notification letter shall be addressed as follows:

Heather Ceron, Chief
Air Permitting Section
ATTN: Operating Permit Program
US EPA Region IV
61 Forsyth Street, SW
Atlanta, GA 30303

However, the e-mail notifications to EPA which actually contain the letter and draft permit shall be sent to R4TitleVTN@epa.gov.

E2-1(MM3). Identification of Responsible Official, Technical Contact, and Billing Contact of the permitted facility:

(a) The application that was utilized in the preparation of this minor modification 3 to this permit is dated October 29, 2018, and signed by Norbert Ritschel, Vice President and Plant Manager of the permitted facility. If this person terminates employment or is assigned different duties and is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.

(b) The application that was utilized in the preparation of this permit is dated September 29, 2015 and identifies Linda Hunt as the Principal Technical Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.

(c) The application that was utilized in the preparation of this permit is dated September 29, 2015 and identifies Linda Hunt as the Billing Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.

TAPCR 1200-03-09-.02(6)

Compliance Method: Included with the requirement.

E3. General Permit requirements

E3-1. Data Entry and Retention

(a) For sources required to maintain monthly logs, all data, including all required calculations, must be entered in the log no later than 30 days from the end of the month for which the data is required.
(b) For sources required to maintain weekly logs, all data, including all required calculations, must be entered in the log no later than 7 days from the end of the week for which the data is required.
(c) For sources required to maintain daily logs, all data, including all required calculations, must be entered in the log no later than 7 days from the end of the day for which the data is required.
(d) All records required by any condition in Section E of this permit must be retained for a period of not less than five years, in accordance with Condition B2. Additionally, these records shall be kept available for inspection by the Technical Secretary or representative.

TAPCR 1200-03-09-.02(11)(e)1.(iii)(II)II

E3-2. Visible emissions

Visible emissions from the sources at this facility, unless otherwise noted, shall not exceed exhibit twenty percent (20%) opacity except for one six-minute period per one (1) hour or more than twenty-four (24) minutes in any twenty-four (24) hours. Visible emissions from these sources shall be determined by EPA Method 9, as published in 40 CFR 60, Appendix A (six-minute average).

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended September 11, 2013, that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

TAPCR 1200-03-05-.01(1), and 1200-03-05-.03(6)

E3-3. Fugitive Dust Restrictions

Fugitive emissions from this facility shall be controlled as specified in Rule 1200-03-08-.01. Specifically, no person shall cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20. Fugitive emissions from this source shall be determined by Tennessee Visible Emissions Evaluation Method 4 as adopted by the Tennessee Air Pollution Control Board on April 16, 1986.

E3-4. Routine maintenance

Routine maintenance, as required to maintain specified emission limits, shall be performed on the air pollution control device(s) and all monitors used by this source. Maintenance records shall be recorded in a suitable permanent form and kept available for inspection by the Division. TAPCR 1200-03-10-.04(2)

E3-5. VOC and HAP Material Content

The as-supplied VOC and HAP content of all VOC or HAP-containing materials to be processed by this facility shall be determined as follows:

Raw Materials Containing VOC, Organic HAP, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Lead, Manganese, Mercury, Nickel, or Selenium - from Material Safety Data Sheets (MSDS), RCRA shipping manifests, laboratory analyses, or other supporting documentation which explicitly list the VOC or HAP content by weight.

The results of these determinations shall be compiled in the following tabular format or an alternative format that readily provides the same required information. This table, along with MSDS, RCRA shipping manifests, laboratory analyses, or other supporting documentation, shall be maintained at the source location and made available for inspection by the Technical Secretary or his representative, beginning 180 days from the issue date of this permit. If new materials are used, or if material formulation is changed, the table shall be updated within 90 days from the initial date of usage of the new or altered material.

Process Material Description[1]	Material Density (lb/gal) or (lb/ft^3)[2]	VOC Content (lb/gal) or (lb/lb)[3]	HAP #1 Content (lb/gal) or (lb/lb)[3]	HAP #2 Content (lb/gal) or (lb/lb)[3]	HAP #N Content (lb/gal) or (lb/lb)[3]
Material #1					
Material #2					
etc.					

Notes:

1. This table shall be expanded as necessary to include additional HAPs, if necessary.
2. Material Density may be recorded as pounds per gallon, pounds per cubic feet, or other measured units for determining emissions.
3. VOC or HAP content may be recorded as pounds per gallon, weight percentage, or other measured units for determining emissions.

TAPCR 1200-03-10-.04(2)

E3-6(MM3). Hazardous Air Pollutant Emission Limit

The maximum emission rate from the entire facility for any single hazardous air pollutant (HAP), listed pursuant to Section 112(b) of the Federal Act, shall not exceed 9.9 tons per year. Total emissions of all HAPs from the entire facility shall not exceed 24.9 tons per year. In the event that the emission rates from the entire facility exceed these limits, the permittee shall provide written notification of the exceedance(s) to the Technical Secretary within fifteen (15) days from the date of discovery.

TAPCR 1200-03-10-.02(2)(a)

Compliance Method: Compliance with this requirement shall be assured by recordkeeping. The following logs shall be completed, as indicated in **Condition E3-1** using the information required by **Condition E3-5**. The logs shall be maintained at the source location and submitted in accordance with **Condition E2**.

Monthly Log for 65-0049 **Month: _____ Year: _____**

Process Source	HAP #1 Emissions (tons/month)	HAP #2 Emissions (tons/month)	HAP #3 Emissions (tons/month)	HAP #4 Emissions (tons/month)	HAP #5 Emissions (tons/month)	HAP #6 Emissions (tons/month)	HAP #n Emissions (tons/month)	Total HAP Emissions (tons/month)
65-0049-01								
65-0049-04								
65-0049-06								
65-0049-09								
65-0049-12(MM1)								
65-0049-13(MM3)								
Total:								

Notes:

1. This table shall be expanded as necessary to include additional HAPs.

Consecutive Twelve-Month HAP Emissions, 65-0049 **Month: _____ Year: _____**

Month/Year	HAP #1 Emissions (tons/month)	HAP #1 Emissions (tons/12 months)	HAP #2 Emissions (tons/month)	HAP #2 Emissions (tons/12 months)	HAP #n Emissions (tons/month)	HAP #n Emissions (tons/12 months)	Total HAP Emissions (tons/month)	Total HAP Emissions (tons/12 months)

Notes:

1. The 12-Month Total Emission value (tons/12 months) is the sum of the HAP emissions in the current month plus the HAP emissions in the 11 preceding months. This log is the total amount of HAPs emitted to the air on a 12-month consecutive basis.
2. If data is not available for the 11 months preceding the initial use of this Table, this value will be equal to the value for Tons per Month. For the second month the emissions will be equal to the sum of the first month and the second month. The same procedure shall be used to calculate HAP emissions for months 3 through 11. Indicate in parentheses the number of the months summed (i.e. 6 (2) represents 6 tons emitted in 2 months).
3. This table shall be expanded as necessary to include additional HAPs.

E3-7. Insignificant activities

Insignificant activities as stated by the permittee in the Title V Application per Rule 1200-03-09-.04(5) are listed below. Additional insignificant activities may be added and operated at any time with the provision that a written notification shall be submitted to the Technical Secretary including an updated APC V.2 application form along with a truth, accuracy, and completeness statement signed by a responsible official. The permit may be updated to include additional insignificant sources by means of an administrative amendment, if necessary.

Activity	ESRN	Exempt Under Rule
Plume Suppressor	N/A	Rule 1200-03-09-.04(4)(a).
Low Grade blender	N/A	Rule 1200-03-09-.04(2)(a)3.
Tube Leach and cutting operation	N/A	Rule 1200-03-09-.04(2)(a)3.
Electric carbon re-burn furnace	N/A	Rule 1200-03-09-.04(2)(a)3.
Propane Storage Tank	N/A	Rule 1200-03-09-.04(5)(f)43.

Activity	ESRN	Exempt Under Rule
MIBK mixing	N/A	Rule 1200-03-09-.04(2)(a)3.

E3-8. Purchase orders and invoices

Purchase orders, invoices or other documentation for all VOC and HAP containing materials along with current material safety sheets or profile sheet must be maintained and kept available for inspection by the Technical Secretary or a Division representative. Records must be maintained on-site for a minimum of five years and must be made available for inspection by the Technical Secretary or a Division representative.

TAPCR 1200-03-10-.04(2)

65-0049-01: MM4, AA1, AA3	**Source Identification:**	Eight Roasting Ovens – each are natural gas fired and rated at 1.5 MMBtu/hr. One chamber furnace and one burning chamber that are natural gas fired and rated at 1.5 MMBtu/hr controlled by two (2) afterburners (8.0 MMBtu/hr each), one quench tank, and one packed tower scrubber. Cooling Chambers and electric reburn furnace with 14,000 cfm baghouse for control. One emergency bypass stack with a shut-off valve for the exhaust duct with a 500-cfm air flow rate. This source has a CAM plan.

E4. Conditions specific to source 65-0049-01

E4-1(MM4). Heat Input Capacity Restriction

The total stated heat input capacity for this source is 31.0 million British Thermal Units per hour (MMBtu/hr), which includes 8 ovens, chamber furnace, burning chamber, and 2 afterburners. The Technical Secretary may require the permittee to prove compliance with this rate.

TAPCR 1200-03-07-.07(2)

E4-2(MM1). Fuel Use Restriction

Only natural gas shall be used as fuel for the 8 Roasting Ovens, Chamber Furnace, and 2 Afterburners.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this condition shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E4-3. Raw Material Input Limit

The total raw material input to this source shall not exceed 18,395 tons during any period of twelve (12) consecutive months.

TAPCR 1200-03-07-.07(2), and 1200-03-10-.04(2)

Compliance Method: A log of the raw material input to this source, in a form that readily shows compliance with this condition, must be maintained at the source location and kept available for inspection by the Technical Secretary or Division representative.

E4-4(MM4, AA1, AA3). Particulate Matter Emission Limit

Particulate matter emitted from this source shall not exceed 6.5 pounds per hour (lb/hr) based on daily average basis.

TAPCR 1200-03-07-.03(1)

Compliance Method: The permittee shall assure compliance by the recordkeeping of surrogate monitoring and the use of pollution control equipment (quench tank, packed column, thermal oxidizer, packed tower scrubber and baghouse). The control equipment shall be operating at all times when the source is operating.

Compliance with this emission limitation shall be assured by maintaining a minimum pressure drop across the filter media of 0.5 inches of water column. The pressure drop value for the baghouse shall be recorded once daily when the source is in operation. Days when that source is not operating shall be noted.

For lower pressure drop reading(s) resulting from replacement of bags, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of bags provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of bags. All data, including all required calculations, must be entered in the log no later than 7 days from the end of the day for which the data is required. This log shall be used to assure compliance with this condition and in the reporting requirements of Condition E2 of this permit and must be retained for a period of not less than five years. Reports and certifications shall be submitted in accordance with Condition E2 of this permit.

This source shall operate in accordance with the approved compliance assurance monitoring (CAM) plan. The plan dated January 26, 2017 and signed on January 31, 2017, is incorporated into this permit by reference. The plan may be revised but must have the Technical Secretary's written approval before it becomes effective and applicable.

(a) The following requirements apply to all control equipment used by this source:
   (1) Records of all monitoring, including records of all excursions, shall be documented in a suitable permanent form and kept available for inspection by the Division.
   (2) If the Technical Secretary determines that the monitoring requirements of this permit are inadequate, then this permit may be reopened to impose additional monitoring requirements.
   (3) All three-hour periods (or all batches, if the total batch time is less than three hours) of operation during which the average value of the measured parameter is less than the specified minimum shall be reported as deviations to the Division in accordance with Condition E2(a).
   (4) All monitoring equipment used by this source shall be installed, calibrated, maintained, and operated in compliance with the manufacturer's written specifications or recommendations, and in a manner that allows the accurate measurement of each monitored parameter across the entire range of expected conditions. The permittee shall maintain copies of manufacturer's specifications for all monitoring equipment for the life of the source. These specifications shall be made available to the Technical Secretary or his representative upon request.
   (5) The permittee shall maintain written manufacturer's specifications for all continuous monitoring equipment at the source location for the life of the source. These specifications shall be kept available for inspection by the Technical Secretary or his representative.
   (6) Excursions below the operating parameter limits specified below shall not be considered violations of this condition unless the average value of either parameter is less than the applicable minimum value during any period of three consecutive hours (or the batch average, if the total batch time is less than three hours). Excursions resulting from startups, shutdowns, or malfunctions shall not be considered violations of this condition.

(b) The following applies to the scrubber liquor flow rate and scrubber liquor pH:
   (1) The continuous monitoring equipment shall monitor the following operating parameters: scrubber liquor flow rate, in gallons per minute; and scrubber liquor pH, in standard pH units.
   (2) The monitoring equipment shall be equipped with continuous recorders.
   (3) All pH meters used by this source must accurately measure the scrubber liquor pH across the entire range of expected conditions.
   (4) All flow meters used by this source must accurately measure the scrubber liquor flow rate across the entire range of expected flow conditions.
   (5) A minimum pH value of 8.5 for the liquor shall be maintained during times of operation. The minimum value is calculated using the average of the measured value of each hour for each three-hour period or the batch time if less than three hours.

(6) A minimum average value of 100 gallons per minute for the liquor flow rate shall be maintained during times of operations. The minimum value is calculated using the average of the measured value of each hour for each three-hour period or the batch time if less than three hours.

(c) The following applies to the thermal oxidizer:
(1) The continuous monitoring equipment shall monitor the combustion chamber temperature of the thermal oxidizer.
(2) The temperature monitoring equipment shall be equipped with a continuous recorder and have accuracy within one percent (1%) of the combustion temperature expressed in degrees Fahrenheit (°F) or within 0.5°F, whichever is greater.

The minimum temperature of 1400 °F for the thermal oxidizer shall be maintained during times of operation.

(d) The following applies to the emergency bypass stack:
(1) The installation of the valve and the emergency bypass stack does not affect normal operations of the Burning Chamber and any required use of the emergency bypass stack will be reported as per rule TAPCR 1200-03-20-.03.
(2) Installation of the emergency bypass stack will not increase actual emissions during normal operations. Emissions will only be exhausted from the emergency bypass stack in the event of an exhaust fan or control equipment failure. Excess emissions will be logged and reported as per rule TAPCR 1200-03-20-.03, .04, and .06.
(3) The bypass stack must remain closed at all times, except for emergency purposes during a malfunction event and only when necessary, to protect the safety of the employees working in the area.
(4) In the event of a malfunction to the exhaust fan or control equipment, excess emissions may still occur even without the use of the emergency bypass stack. The emergency bypass stack only serves to exhaust the hazardous gases out of the employee working area. Any malfunction or emergency condition would be required to be documented and reported, including excess emissions, as indicated in Conditions B7, B8, B9, and B11.

E4-5(MM1). Volatile Organic Compounds Emission Limit

Volatile organic compounds (VOC) emitted from this source shall not exceed 10.89 tons during any period of twelve consecutive months.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this limitation shall be assured with recordkeeping of surrogate monitoring and the use of pollution control equipment (quench tank, packed column, thermal oxidizer, and packed tower scrubber). The control equipment shall be operating at all times when the source is operating. Compliance with this limitation shall be assured with recordkeeping of surrogate monitoring and the use of pollution control equipment (quench tank, packed column, thermal oxidizer, packed tower scrubber, and baghouse). The logs required in Conditions E4-4 and E4-8 shall be used to certify compliance with this condition. Certifications shall be submitted in accordance with Condition E2.

This source shall operate in accordance with the approved compliance assurance monitoring (CAM) plan. The plan dated January 26, 2017 and signed on January 31, 2017, is incorporated into this permit by reference. The plan may be revised but must have the Technical Secretary's written approval before it becomes effective and applicable.

E4-6(MM4). Sulfur Dioxide Emission Limit

Sulfur dioxide (SO_2) emitted from this source shall not exceed 0.02 lb/hr, on a daily average basis.

TAPCR 1200-03-14-.01(3) and agreement letter dated October 31, 2019.

Compliance Method: Compliance with **Conditions E4-1 and E4-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

TAPCR 1200-03-07-.07(2)

E4-7. Oxides of Nitrogen Emission Limit

Nitrogen oxides (NO_X) emitted from this source shall not exceed 3.6 lb/hr, on a daily average basis.

TAPCR 1200-03-07-.07(2)

Compliance Method: The potential to emit NO_x from this source is less than five tons per year. In accordance with TAPCR 1200-03-09-.04(5)(c)3 and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for NO_x emissions from this source. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

E4-8. VOC and HAP Actual Emission Requirements

The permittee shall calculate the actual quantities of VOC and organic HAPs emitted from this source during each calendar month and shall maintain records of these emissions in a form that readily shows compliance with **Condition E4-5**. These records must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. VOC and organic HAP emissions from the afterburner shall be determined as follows by using data from the source test for $\eta_{Overall}$.

$$VOC_{Emission} = VOC_{Input} \times (1-\eta_{Overall})$$

Where: $VOC_{Emission}$ is the emission of VOCs and/or HAPs.
VOC_{Input} is the amount of VOC or HAP input to the source
$\eta_{Overall}$ is the overall efficiency, or the product of the capture and destruction efficiency.

TAPCR 1200-03-10-.02(2)(a)

E4-9(MM4). Visible Emissions Limit

Visible emissions from this source shall not exhibit greater than ten percent (10%) opacity, except for (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.01(3), 1200-03-05-.03(6), and the agreement letter dated August 13, 2019.

65-0049-04:	**Source Identification:**	Pan Dumper and Ball Mills 1, 2, 3, 4, 5 & 6, and High-Grade metal sampling process with two (2) 10,000 CFM Baghouse Controls and Tray Loading /Unloading with one (1) 10,000 CFM Baghouse Control.

E5. Conditions specific to source 65-0049-04

E5-1. Raw Material Input Limit

The total raw material input to this source shall not exceed 8,069 tons during any period of twelve (12) consecutive months.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this condition shall be assured by recordkeeping. A log of the raw material input to this source, in a form that readily shows compliance with this condition, must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative.

E5-2(MM2). Particulate Matter Emission Limit

Particulate matter emitted from this source shall not exceed 3.41 pounds per hour (lb/hr) on a daily average basis.

TAPCR 1200-03-07-.03(1)

Compliance Method: Compliance with this emission limitation shall be assured by maintaining a minimum pressure drop across the filter media of 0.25 inches of water column. The pressure drop shall be recorded daily while this source is operating. This log shall be used to assure compliance with this condition and in the reporting requirements of **Condition E2** of this permit and must be retained for a period of not less than five years. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

65-0049-06: Source Identification: One Crucible Furnace – natural gas fired and rated at 1.2 MMBtu/hr. Control equipment consists of a 4,000 CFM baghouse.

E6. Conditions specific to source 65-0049-06

E6-1. Heat Input Capacity Restriction

The total stated heat input capacity for this source is 1.2 million British Thermal Units per hour (MMBtu/hr). The Technical Secretary may require the permittee to prove compliance with this rate.

TAPCR 1200-03-07-.07(2)

E6-2. Fuel Use Restriction

Only natural gas shall be used as fuel for the crucible furnace.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this condition shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E6-3. Raw Material Input Limit

The total raw material input to this source shall not exceed 9,001 tons during any period of twelve (12) consecutive months.

TAPCR 1200-03-07-.07(2) and 1200-03-10-.04(2)

Compliance Method: A log of the raw material input to this source, in a form that readily shows compliance with this condition, must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative.

E6-4(MM2). Particulate Matter Emission Limit

Particulate matter emitted from this source shall not exceed 3.7 pounds per hour (lb/hr) based on daily average basis.

TAPCR 1200-03-07-.03(1)

Compliance Method: Compliance with this emission limitation shall be assured by maintaining a minimum pressure drop across the filter media of 1.2 inches of water column. The pressure drop shall be recorded daily while this source is operating. This log shall be used to assure compliance with this condition and in the reporting requirements of **Condition E2** of this permit and must be retained for a period of not less than five years. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

E6-5. Volatile Organic Compounds Emission Limit

Volatile organic compounds (VOC) emitted from this source shall not exceed 0.1 tons during any period of twelve consecutive months.

TAPCR 1200-03-07-.07(2)

Compliance Method: VOC emitted from this source are products of combustion. Worst case scenario calculations indicate that emissions will not exceed the value stated in this condition provided VOC containing material is not input to the furnaces and natural gas only is used to fire the furnaces. Compliance with this limitation shall be assured with recordkeeping. Compliance with **Condition E6-2** will demonstrate

compliance with this condition. Therefore, this condition requires annual certification that natural gas only was used to fire the furnaces and that the material input to the furnaces does not contain VOC.

E6-6. Sulfur Dioxide Emission Limit
Sulfur dioxide (SO_2) emitted from this source shall not exceed 0.4 TPY.

TAPCR 1200-03-14-.03(5)

Compliance Method: Compliance with **Conditions E6-1 and E6-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E6-7. Oxides of Nitrogen Emission Limit
Nitrogen oxides (NO_X) emitted from this source shall not exceed 2.0 lb/hr on a daily average basis.

TAPCR 1200-03-07-.07(2)

Compliance Method: The potential to emit NO_x from this source is less than five tons per year. In accordance with TAPCR 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for NO_x emissions from this source. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

65-0049-09: Source Identification: Natural Gas-Fired Rotary Furnace rated at 1.5 MMBtu/hr Heat Input with Baghouse Control.

E7. Conditions specific to source 65-0049-09

E7-1. Heat Input Capacity Restriction
The stated heat input capacity of the furnace is 1.5 million British Thermal Units per hour (MMBtu/hr). The Technical Secretary may require the permittee to prove compliance with this rate. The process heater must be equipped with low nitrogen oxide (NO_x) technology.

TAPCR 1200-03-06-.03(2)

Compliance Method: Compliance with the low NOx requirement shall be assured by maintaining documentation from the manufacturer that clearly states the furnace/oven is equipped with low NOx technology.

E7-2. Fuel Use Restriction
Only natural gas shall be used as fuel for this source.

Compliance Method: Compliance with this restriction shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

TAPCR 1200-03-07-.07(2)

E7-3. Raw Material Input Limit
The total raw material input to this source shall not exceed 1,500 pounds per hour on a daily basis (6,570 tons per 12 consecutive months).

TAPCR 1200-03-07-.07(2)

Compliance Method: A log of the raw material input to this source, in a form that readily shows compliance with the tons per 12 consecutive months limit, must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative.

E7-4(MM4). Particulate Matter Emission Limit

Particulate matter emitted from this source shall not exceed 0.02 grains per dry cubic foot of stack gases corrected to 70°F and 1 atmosphere (0.23 pounds per hour (lb/hr)).

TAPCR 1200-03-07-.04(2) and agreement letter dated October 1, 2008.

Compliance Method: Compliance with this emission limitation shall be assured by maintaining a minimum pressure drop across the filter media of 0.5 inch of water column. The pressure drop shall be recorded daily while this source is operating. This log shall be used to assure compliance with this condition and in the reporting requirements of **Condition E2** of this permit and must be retained for a period of not less than five years. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

E7-5(MM2). Volatile Organic Compounds Emission Limit

Volatile organic compounds (VOC) emitted from this source shall not exceed 3.0 tons during any period of twelve consecutive months.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this limitation shall be assured with recordkeeping of surrogate monitoring. The following applies to this source. Logs, as required below, shall be maintained at the source location and submitted in accordance with **Condition E2**.

(a) The permittee shall operate all continuous monitoring equipment required by this permit at all times when this source is operating. The permittee shall maintain written manufacturer's specifications for all continuous monitoring equipment at the source location for the life of the source. These specifications shall be kept available for inspection by the Technical Secretary or his representative.

(b) All monitoring equipment used by this source shall be installed, calibrated, maintained, and operated in compliance with the manufacturer's written specifications or recommendations, and in a manner that allows the accurate measurement of each monitored parameter across the entire range of expected conditions. The permittee shall maintain copies of manufacturer's specifications for all monitoring equipment for the life of the source. These specifications shall be made available to the Technical Secretary or his representative upon request.

(c) A minimum value is set at 1200°F. The temperature of the furnace shall be monitored as follows:

(1) All continuous monitoring equipment shall be installed and operational upon startup of this source.
(2) The continuous monitoring equipment shall monitor the combustion chamber temperature of the furnace.
(3) The temperature monitoring equipment shall be equipped with a continuous recorder and have accuracy within one percent (1%) of the combustion temperature expressed in degrees Fahrenheit (°F) or within 0.5°F, whichever is greater.
(4) Using data obtained from the continuous recorder, the permittee shall calculate the average temperature of the furnace for each hour that the source is in operation.
(5) Excursions below the minimum operating temperature of 1200°F, as determined during the test which was approved on January 25, 2011, shall not be considered violations of this condition unless the average temperature during any period of three consecutive hours is more than 50 °F below the minimum operating temperature.
(6) Excursions below the minimum operating temperature resulting from startups, shutdowns, or malfunctions shall not be considered violations of this condition.
(7) All three-hour periods of operation during which the average combustion temperature is more than 50 °F below the minimum operating temperature shall be reported to the Division as specified in **Condition E2.**

E7-6. Sulfur Dioxide Emission Limit

Sulfur dioxide (SO_2) emitted from this source shall not exceed 1.0 lb/hr on a daily average basis.

TAPCR 1200-03-14-.01(3) and agreement letter dated March 10, 2009.

Compliance Method: Compliance with **Conditions E7-1 and E7-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E7-7. Oxides of Nitrogen Emission Limit

Nitrogen oxides (NO_x) emitted from this source shall not exceed 0.15 lb/hr on a daily average basis.

TAPCR 1200-03-07-.07(2)

Compliance Method: The potential to emit NO_x from this source is less than five tons per year. In accordance with TAPCR 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for NO_x emissions from this source. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

65-0049-11: Source Identification: Emergency Kohler brand Standby Diesel Generator Engine set rated at 1000 KW.

This source is subject to NSPS subpart IIII and MACT subpart ZZZZ.

E8. Conditions specific to source 65-0049-11

E8-1. Operating Time Restriction

Operating time for this source shall not exceed 500 hours per calendar year. The generator shall be equipped with a non-resettable hour meter prior to startup of the engine.

TAPCR 1200-03-09-.03(8), 1200-03-10-.02(2)(a), and 40 CFR Part 60 Subpart IIII.

Compliance Method: Compliance with this restriction shall be assured by recordkeeping. The permittee shall keep a log of the number of operating hours for each month and calendar year at this source, in a form that readily provides the information required in the following table and shows compliance with this condition and **Condition E8-4**. All data, including all required calculations, must be entered in the log in accordance with **Condition E3-1**. The permittee shall retain this record at the source location in accordance with **Condition B2**.

Monthly/Yearly Log: Source 65-0049-11

Table 1				
Year:				
	Operating Hours per Month			**Comments****
Month	**Maintenance checks & readiness testing**	**Other non-emergency operation**	**Emergency operation**	
January				
February				
etc.				
Totals				
** The permittee must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation.				

Table 2	
Year:	
	Operating Hours per Month
Month	**Maintenance checks & readiness testing and other non-emergency operation ****
January	
February	
Etc.	

Total	
** Sum of operating hours in columns 2 and 3 in Table 1 above for each month	

E8-2. Fuel Use Restriction
Only No. 2 diesel fuel shall be used as fuel for this source.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this restriction shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E8-3. Fuel Sulfur Content Restriction
The sulfur content of the No. 2 diesel fuel shall not exceed 0.05 percent by weight.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this restriction shall be assured by annual certification and vendor information. Certifications shall be submitted in accordance with **Condition E2**.

E8-4. Maintenance and Testing Allowances
The permittee must operate the emergency stationary ICE according to the requirements in paragraphs (a) through (c) of this condition. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (a) through (c) of this condition, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (a) through (c) of this condition, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(a) There is no time limit on the use of emergency stationary ICE in emergency situations.

(b) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs (1) through (3) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (c) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph.

(1) Emergency stationary ICE 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 Administrator 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.

(2) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(3) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. 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 provided in paragraph (b)(2) of this condition. The 50 hours per 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.

TAPCR 1200-03-09-.03(8) and 40 CFR 60 Subpart JJJJ -§60.4243(d)(1) through (3)

Compliance Method: Compliance with this restriction shall be assured by recordkeeping. The log requirements in **Condition E8-1** shall be used to demonstrate compliance.

E8-5. Particulate Matter Limit
Particulate matter (TSP) emitted from this source shall not exceed 1.3 pounds per hour.

TAPCR 1200-03-09-.03(8) and 40 CFR §60.4205(b)

Compliance Method: Compliance with **Conditions E8-1 and E8-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certification shall be submitted in accordance with **Condition E2**.

E8-6. Sulfur Dioxide (SO_2) Limit
SO_2 emitted from this source shall not exceed 0.6 pounds per hour.

TAPCR 1200-03-14-.03(5)

Compliance Method: Compliance with **Conditions E8-1 and E8-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certification shall be submitted in accordance with **Condition E2**.

E8-7. Carbon Monoxide (CO) Limit
CO emitted from this source shall not exceed 28.1 pounds per hour.

TAPCR 1200-03-09-.03(8) and 40 CFR §60.4205(b)

Compliance Method: Compliance with **Conditions E8-1 and E8-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certification shall be submitted in accordance with **Condition E2**.

E8-8. Volatile Organic Compounds (VOC) Limit
VOC emitted from this source shall not exceed 3.5 pounds per hour.

TAPCR 1200-03-09-.03(8) and 40 CFR §60.4205(b)

Compliance Method: Compliance with **Conditions E8-1 and E8-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certification shall be submitted in accordance with **Condition E2**.

E8-9. Oxides of Nitrogen (NO_x) Limit
NO_x emitted from this source shall not exceed 22.7 pounds per hour.

TAPCR 1200-03-09-.03(8) and 40 CFR §60.4205(b)

Compliance Method: Compliance with **Conditions E8-1 and E8-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certification shall be submitted in accordance with **Condition E2**.

E8-10. MACT Subpart ZZZZ Requirements
The permittee shall comply with the requirements of 40 CFR Part 63 Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). The permittee has complied with this requirement by submitting the initial notification of 40 CFR §63.6645(f).

TAPCR 1200-03-09-.03(8)

65-0049-12(MM3)	**Source Identification:** Six (6) Inductotherm Electric Melting Furnaces, Eight (8) Cooling Chambers, and Two (2) Tray Furnaces with one afterburner; Seven (7) Ball Mills, Screener, Jaw Crusher, Polishing Operations, Two (2) Ball Mills, Sifter, and Transfer operations; and Three (3) Auxiliary Furnaces with Baghouse Control. Auxiliary Furnaces are Voss Converter, Drum Furnace and PTA coke furnace. All the building-enclosed operations' particulate emissions are captured by one 43,000 CFM baghouse. Baghouse catch is recycled back to process for economic recovery. This source has a CAM plan for the afterburner. The baghouse control is considered inherent and non-CAM.

E9(MM1). Conditions specific to source 65-0049-12

E9-1(MM3). Heat Input Capacity Restriction

The total stated heat input capacity for this source is 4.26 million British Thermal Units per hour (MMBtu/hr), which consists of two (2) tray furnaces; Auxiliary furnace; and the afterburner. The Technical Secretary may require the permittee to prove compliance with this rate.

TAPCR 1200-03-09-.03(8)

E9-2(MM3). Fuel Use Restriction

Only natural gas shall be used as fuel for the tray furnaces and afterburner. Auxiliary 1 (rhodium oil) and 1b shall only use natural gas and diesel. Auxiliary 2 (Voss Converter) and 2b (Voss Converter) shall only use natural gas and propylene/oxygen fuel mixture. Auxiliary 3 shall only use natural gas, coke, and charcoal.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with these conditions shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E9-3(MM1). Raw Material Input Limit

The total raw material input to this source shall not exceed 5,111 tons during any period of 12-consecutive months.

TAPCR 1200-03-10-.02(2)(a) and 1200-03-09-.03(8)

Compliance Method: A log of the raw material input to this source, in a form that readily shows compliance with this condition must be maintained at the source location and kept available for inspection for the Technical Secretary or a Division representative

E9-4(MM3). Particulate Matter Emission Limit

Particulate matter emitted from this source shall not exceed 4.96 pounds per hour (lb/hr) based on daily average basis.

TAPCR 1200-03-07-.01(5) and Agreement letter dated November 8, 2016.

Compliance Method: The permittee shall assure compliance with the particulate matter emission limitation by keeping the pressure drop across the baghouse equal to or above the values listed in the table below. The control equipment shall be operating at all times when the source is operating.

Identification Number	Description	Minimum Pressure Drop (inches of water)
65-0049-12	Metal Melting Source	1.3

The pressure drop for the baghouse shall be recorded once daily when the source is in operation. The days when the source does not operate shall be noted. For lower pressure drop reading(s) resulting from replacement of bags, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of bags provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of bags.

E9-5(MM3). Volatile Organic Compounds Emission Limit

Volatile organic compounds (VOC) emitted from this source shall not exceed 32.11 tons during any period of twelve consecutive months.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this limitation shall be assured with recordkeeping of surrogate monitoring and the use of pollution control equipment (afterburner). The logs required in **Conditions E9-4(MM3) and E9-8(MM3)** shall be used to certify compliance with this condition. Certifications shall be submitted in accordance with **Condition E2**.

This source shall operate in accordance with the approved compliance assurance monitoring (CAM) plan. The plan dated January 26, 2017 and signed January 31, 2017 is incorporated into this permit by reference (see Attachment 2). The plan may be revised but must have the Technical Secretary's written approval before it becomes effective and applicable.

The following applies to the afterburner:

(1) The continuous monitoring equipment shall monitor the combustion chamber temperature of the afterburner.

(2) The temperature monitoring equipment shall be equipped with a continuous recorder and have accuracy within one percent (1%) of the combustion temperature expressed in degrees Fahrenheit (°F) or within 0.5°F, whichever is greater.

(3) The minimum temperature of 1,400°F for the afterburner shall be maintained during times of operation.

E9-6(MM1). Sulfur Dioxide Emission Limit

Sulfur dioxide (SO^2) emitted from this source shall not exceed 3.29 lb/hr.

TAPCR 1200-03-07-14-.01(3) and Agreement letter dated November 8, 2016.

Compliance Method: Compliance with **Condition E9-1(MM3) and E9-2(MM3)** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E9-7(MM3). Oxides of Nitrogen Emission Limit

Nitrogen oxides (NOx) emitted from this source shall not exceed 0.66 lb/hr on a daily average basis.

TAPCR 1200-03-07-.07(2) and Agreement letter dated November 8, 2016.

Compliance Method: The potential to emit NOx from this source is less than five tons per year. In accordance with TAPCR 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of TAPCR 1200-03-09-.02(11)(e)1.(i), The permittee shall submit annually a compliance certification for NOx emissions for this source. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

E9-8(MM3). [Reserved]

E9-9(MM3). Except as noted in **Condition E9-10(MM3)**, the operating parameters listed in **Condition E9-8(MM3)** shall be measured and recorded no less than once per day. A log of this information must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.

TAPCR 1200-03-10-.02(2)(a)

E9-10(MM1). The temperature of the afterburner shall be monitored as follows:

a). The permittee shall, calibrate, operate, and maintain continuous monitoring equipment. The continuous monitoring equipment shall monitor the combustion chamber temperature of the afterburner.

b). The temperature monitoring equipment must be equipped with a continuous recorder and have accuracy within 1 percent of the combustion temperature expressed in degrees Celsius (°C) or within 0.5°C, whichever is greater. Records of the combustion chamber temperature shall be documented in a suitable permanent form and kept available for inspection by the Division. These records must be retained for a period of not less than five (5) years.

c). Source testing on April 17, 2018**,** determined the destruction minimum temperature of 1,400^{o} F for the afterburner. The permittee shall maintain the destruction minimum temperature for the afterburner and shall maintain a record of any excursions below this temperature. All temperature excursions shall be reported to the Division as specified in **Condition E2(b)(3)**. Records of temperature excursions must be retained at the facility for a period of not less than five (5) years.

TAPCR 1200-03-10-.02(1)(a)

E9-11(MM3). The permittee shall calculate the actual quantities of VOC and organic HAPs emitted from this source during each calendar month and shall maintain records of these emissions in a form that readily shows compliance with **Conditions E9-5(MM3)** and **E3-6** of this permit. These records must be maintained at the source location and kept available for inspection by the Technical Secretary or a Division representative. These records must be retained for a period of not less than five (5) years.

VOC and organic HAP emissions from the afterburner shall be determined as follows by using data from the source test for $\eta_{Overall}$.

$$VOC_{Emission} = VOC_{Input} \times \left(1 - \eta_{Overall}\right)$$

Where:

- $VOC_{Emission}$ is the emission of VOCs and/or HAPs.
- VOC_{Input} is the amount of VOC or HAP input to the source
- $\eta_{Overall}$ is the overall efficiency or the product of the capture and destruction efficiency.

TAPCR 1200-03-10-.02(2)(a)

65-0049-13(AA4)	**Source Identification:** One (1) "Rhodium-Oil" Furnace with Baghouse Control. Baghouse catch is recycled back to process for economic recovery. Administrative Amendment AA2 included the addition of a new wet scrubber for product capture and is not considered as a control device. The scrubber receives exhaust flow input from the furnace and exhausts to the baghouse. Also, the Raw Material Input Limit at Condition E13-3(AA2) and the allowable VOC emission limit at Condition E13-5(AA2) are each corrected from 12.25 to 12.5 tons per 12 months. Additionally, because there was a possibility that the new scrubber may affect the input flow characteristics to the baghouse, a new pressure drop study was required for the existing baghouse at condition E13-4(AA2). The baghouse control is considered inherent and not in CAM program.

E13(AA2). Conditions specific to source 65-0049-13

E13-1(MM3). Heat Input Capacity Restriction

The total stated heat input capacity for the rhodium-oil furnace is 0.15 million British thermal units per hour (MMBTU/hr). The Technical Secretary may require the permittee to prove compliance with this rate.

TAPCR 1200-03-07-.07(2)

E13-2(MM3). Fuel Use Restriction

Only Natural gas and Diesel fuel shall be used in this source.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this condition shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E13-3(AA2). Raw Material Input Limit

The total raw material input to this source shall not exceed 12.5 tons during any period of twelve (12) consecutive months.

TAPCR 1200-03-07-.07(2) and 1200-03-10-.02(2)(a) and agreement letter dated October 29, 2018

Compliance Method: A log of the raw material input to this source, in a form that readily shows compliance with this condition, must be maintained at the source location and kept available for inspection for the Technical Secretary. The facility operator has agreed to treat this source as if the raw material is 100% VOC emissions as if a surrogate monitor. The catalytic input material's SDS indicates that HAP emissions are 80% of the VOC content and are emitted. Therefore, the facility operator has agreed that tracking the input material is equivalent to tracking the VOC/HAPs emissions; as if 100% content of input material. The HAPs emissions from this source shall be included in **Condition E3-6**.

E13-4(AA4). Particulate Matter Emission Limit

Particulate matter emitted from the Rhodium-Oil Furnace shall not exceed 0.3 pounds per hour (lb/hr) based on a daily average.

TAPCR 1200-03-07-.01(5)

Compliance Method: The permittee shall assure compliance with the PM emission limitations by operating, maintaining, and inspecting the air pollution control devices (APCD) as follows:

(a) The permittee shall comply with **Conditions E3-3 and E3-4** of this permit.

(b) Compliance with the 0.3 pounds per hour (lb/hr) particulate emission limit shall be assured by maintaining the required minimum pressure drop value of 0.1 inches of water column for the baghouse. The pressure drop value shall be recorded once daily when the source is in operation. Days when the source is not operating shall be noted. For lower pressure drop reading(s) resulting from replacement of bags, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of bags, provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of bags. All data, including all required calculations, must be entered in the log no later than 7 days from the end of the day for which the data is required.

E13-5(AA2). Volatile Organic Compounds Emission Limit

Volatile organic compounds (VOC) emitted from the Rhodium-Oil Furnace shall not exceed 12.5 tons during any period of twelve consecutive months.

TAPCR 1200-03-07-.07(2) and agreement letter dated October 29, 2018

Compliance Method: The permittee shall assure compliance with the VOC emission limitation by complying with C**onditions E13-1** and **E13-3** and by operating, maintaining, and inspecting the air pollution control devices (APCD).

E13-6(MM3). Sulfur Dioxide Emission Limit

Sulfur dioxide ($S0_2$) emitted from this source shall not exceed 0.001 lb/hr.

TAPCR 1200-03-14-.01(3) and Agreement letter dated October 29, 2018

Compliance Method: Compliance with **Conditions E13-1 and E13-2** will demonstrate compliance with this condition. Compliance with this condition shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2**.

E13-7(MM3). Oxides of Nitrogen Emission Limit

Nitrogen oxides (NO_x) emitted from this source shall not exceed 0.02 lb/hr on a daily average.

TAPCR 1200-03-07-.07(2)

Compliance Method: The potential to emit NO_x from this source is less than five (5) tons per year. In accordance with TAPCR 1200-03-09-.04(5)(c)3 and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for NO_x emissions from this source. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

END OF ADMINISTRATIVE AMENDMENT 4 TO PERMIT NUMBER: 570857

.

ATTACHMENT 1

Opacity Matrix Decision Tree For
Visible Emission Evaluation **EPA Method 9**
dated June 18, 1996 and amended September 11, 2013

Decision Tree PM for Opacity for Sources Utilizing EPA Method 9*

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PM required.*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants
Particulates, VOC, CO, SO_2, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

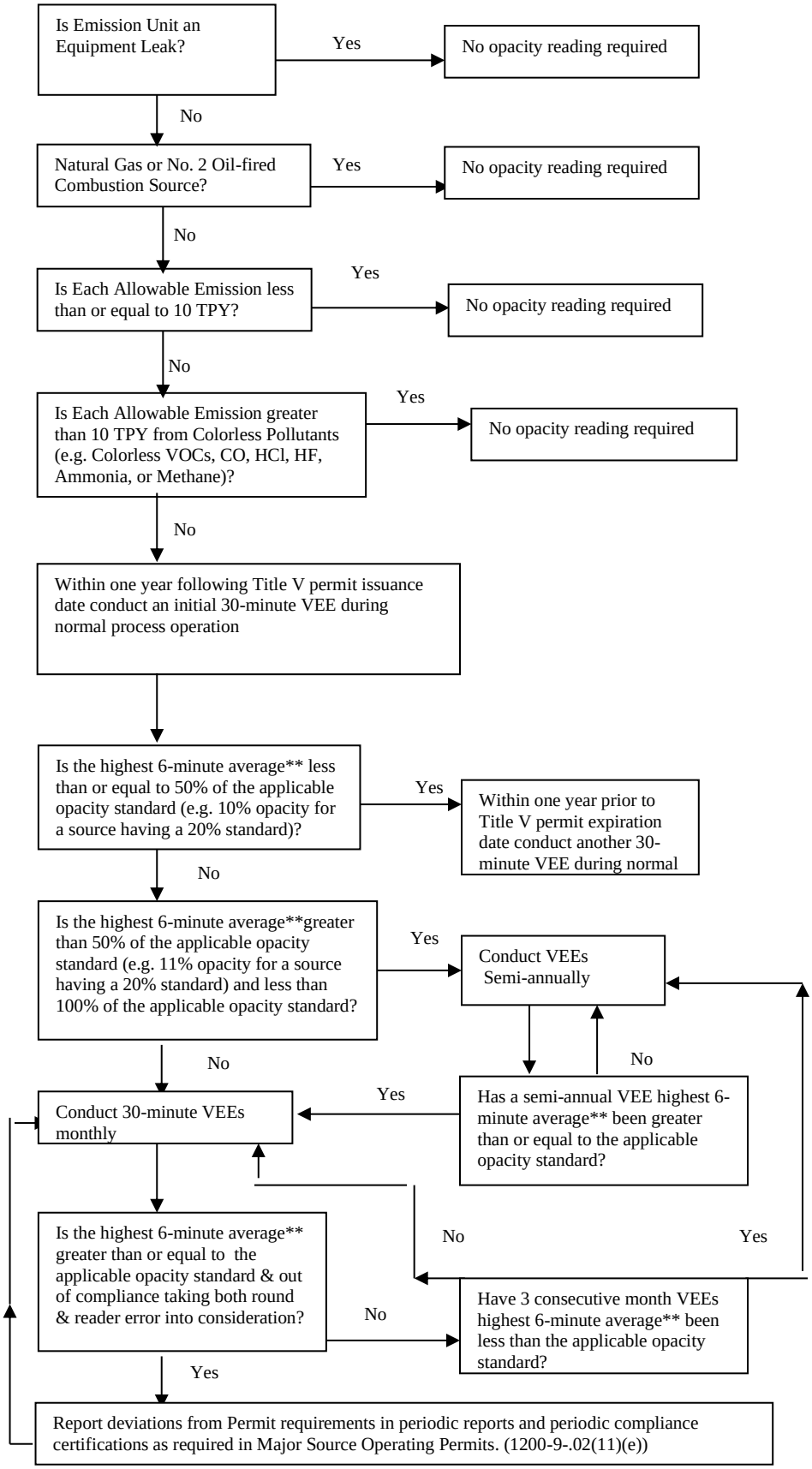
Reader Error
EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards:
The TAPCD guidance is to declares non-compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS stipulate opacity standards:
EPA guidance is to allow only engineering round. No allowance for reader error is given.

*Not applicable to Asbestos manufacturing subject to 40 CFR 61.142

**Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.

Dated June 18, 1996
Amended September 11, 2013



ATTACHMENT 2

CAM Plan

Dated **February 13, 2019** and signed on **February 15, 2019**

HERAEUS PRECIOUS METALS NORTH AMERICA, LLC

1975 Knoxville Highway
Wartburg, Tennessee

Compliance Assurance Monitoring (CAM) Plan

Emission Source No. 65-0049-01 & -12

February 13, 2019

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HERAEUS PRECIOUS METALS NORTH AMERICA, LLC
Wartburg, Tennessee

Emission Source 65-0049

Responsible Official Certification

I have reviewed this Compliance Assurance Monitoring (CAM) Plan in its entirety and based on information and belief formed after reasonable inquiry, the statements and information contained in this plan are true, accurate, and complete.

Norbert Ritschel,
Vice President and Plant Manager

Responsible Official

Signature

15 Feb 19

Date

HERAEUS PRECIOUS METALS NORTH AMERICA, LLC
Compliance Assurance Monitoring (CAM) Plan
Wartburg, Tennessee

1.0 Background

Compliance Assurance Monitoring (CAM) is required for affected sources subject to 40 CFR 64. A CAM plan detailing the applicability and proposed monitoring approach of affected sources is required to be included as part of the 40 CFR 70 (Title V) operating permit process. The Heraeus facility located in Wartburg, Tennessee, is submitting this CAM Plan in conjunction with its previously submitted Title V Operating Permit Application.

The following bullet items identify the applicability requirements for CAM as applied to individual emission units at a facility.

- Emission unit is located at a major source that is required to obtain a Title V permit;
- Emission unit is subject to emission limitation or standard for an applicable pollutant;
- Emission unit uses a control device to achieve compliance with the emission limitation;
- Potential pre-control emissions of applicable pollutants (with limits) from the emission unit are at least 100 percent of major source amount (100 tons per year); and,
- Emission unit is not otherwise exempt and does not use a Continuous Emission Monitor (CEM) for the applicable pollutant.

2.0 Applicability

Permitted emission units at the Heraeus facility were evaluated to determine which emission units have specific emission limitations and are equipped with control devices to maintain compliance with the emission limitations. Pre-control potential emissions were estimated for those emission units that were determined to have both an emission limitation and associated control equipment in order to determine if the uncontrolled emissions were greater than 100 percent of the major source amount. Source 01 uses oxidizers to control VOC emissions. VOC pre-control potential emissions were calculated for Source 01 greater than 100 tons per year (tpy) and, therefore, the oxidizers are included in the CAM plan. Source 01 uses a scrubber to control PM emissions, however, the calculated pre-control potential emissions for PM are less than 100 tpy based on a back calculation using the control efficiency and stack test emission rate.

Uncontrolled PM Calculation for the Scrubber

1.04 lb/hr (stack test data) / 0.1 (control efficiency 90%) x 8,760 hr/yr / 2,000 lb/ton = 45.6 tpy PM

The material collectors for Sources 04, 06, and 09 were previously included in this plan; however, the collectors are used to collect valuable material that is returned to process. Furthermore, the material collected is valued at approximately 4.5 times the cost of the material collectors. Since the collectors return the material to the process, they are inherent process equipment, are not considered control equipment, and are not included in this CAM plan. A complete listing of the emission sources and CAM applicability calculations has been included with this plan.

Based on the CAM applicability calculations, it was determined that the following emission sources and associated control equipment types must be included in the CAM plan.

Table 1. Emission Units Subject to CAM Requirements.

Emission Point Number	TAPCD Source Number	Emission Unit Description	Control Equipment	Applicable Pollutant	Potential Pre-Control Emissions (tpy)	Potential Post Control Emissions (tpy)
S1-1	65-0049-01	(8) Roasting Ovens	Oxidizer 1	VOC	>100	7.17
S1-1	65-0049-01	Chamber Furnace	Oxidizer 2	VOC		
S12-1	65-0049-12	(2) Tray Furnaces	Afterburner	VOC	>100	12.78

3.0 Oxidizers/Afterburner

Heraeus uses two Oxidizers in parallel on Source 01 to control VOC's from the eight (8) tray furnaces and the chamber furnace. Oxidizer No. 1 and Oxidizer No. 2 operates at a minimum of 1,400°F as determined by an Emissions Performance Test for Particulates and VOC that was conducted on May 19-20, 2005. At these temperatures, it was determined that the oxidizers were capable of destroying the VOC sufficient to limit the amount of VOC emissions below the 6.5 lb/hr limit.

Source 12 utilizes one afterburner to control VOC's from two (2) tray furnaces. Stack testing was performed on April 17, 2018 to set the minimum temperature for VOC control. Based on the results, TDEC agrees with a minimum operating temperature of 1,400°F.

3.1 Monitoring Approach for Oxidizers/Afterburner

The following tables summarize the monitoring approach for the oxidizer control devices associated with the emission units in source 65-0049-01 that are subject to CAM.

I. Indicators	**Indicator No. 1** Combustion Chamber Temperature of the Thermal Oxidizer/Afterburner as a surrogate for VOC destruction.	**Indicator No. 2** Regular Inspections of the Oxidizers/Afterburners
Measurement Approach	Continuous monitoring of the combustion chamber temperature of the thermal oxidizer/afterburner	Operators shall conduct a visible inspection of the equipment at least once per eight hour shift to ensure proper operation of the equipment. Maintenance shall conduct an annual inspection of the burner assembly, blowers, fans, dampers, refractory, fuel lines, and duct work to ensure that all associated equipment is operating properly.
II. Indicator Range	A deviation shall be defined as any three hour period of operation during which the average value of the measured parameter is less than 1,400°F for the Source 01 Oxidizers and 1,400°F for the Source 12 Afterburner	Equipment shall be maintained in accordance with manufacturer's recommendations
III. Performance Criteria A. Data Representativeness	Temperature Transmitter shall be installed in the Oxidizer/Afterburner combustion chamber.	N/A
B. Verification of Operational Status	An audible alarm will sound if the temperature drops below 1400° F for the Oxidizers and a separate alarm will sound if the temperature falls below 1400° F for the Afterburner or if the system shuts off.	N/A
C. QA/QC Practices and Criteria	Monitoring Equipment shall be installed, calibrated, maintained, and operated in compliance with the manufacturer's written specifications or recommendations. The temperature monitoring equipment shall be equipped with a continuous recorder and have accuracy within one percent (1%)	Operator shall log the visible inspection once per eight hour shift, indicating any potential problems and corrective actions taken. The log shall be documented in suitable permanent form and kept available for inspection by the TNAPC.

	of the combustion temperature expressed in degrees Fahrenheit (°F) or within 0.5°F, whichever is greater. Thermocouples will be replaced with calibrated units every 6 months.	
D. Monitoring Frequency	Continuous	Manually once per eight hour shift.
E. Data Availability	Data availability from the continuous monitoring equipment must be maintained at a minimum of 95% for all operating hours to insure compliance. For example, if the oxidizers/afterburner operated for 4,000 hours in a given reporting period, the minimum number of hourly averages must equal at least 3,800 averages.	Data availability from the visual inspections log entries must be maintained at a minimum of 95% for all shifts where the afterburner was in operation. For example, if the afterburner operated for 4,000 hours or 500 eight hour shifts in a reporting period, the minimum number of inspections should be at least 475 log entries.

ATTACHMENT 3 (AA1)

APC 36 – Title V Fee Selection
dated April, 2019

DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor, Nashville, TN 37243
Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

TITLE V FEE SELECTION

Type or print and submit to the email address above.

FACILITY INFORMATION

1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)]

2. Site name (if different from legal name)

3. Site address (St./Rd./Hwy.)	County name
City	Zip code

4. Emission source reference number	**5.** Title V permit number

FEE SELECTION

This fee selection is effective beginning January 1, _____. When approved, this selection will be effective until a new Fee Selection form is submitted. Fee Selection forms must be submitted on or before December 31 of the annual accounting period.

6. Payment Schedule (choose one):

Calendar Year Basis (January 1 – December 31) ☐ Fiscal Year Basis (July 1 – June 30) ☐

7. Payment Basis (choose one):

Actual Emissions Basis ☐ Allowable Emissions Basis ☐ Combination of Actual and Allowable Emissions Basis ☐

8. If Payment Basis is "Actual Emissions" or "Combination of Actual and Allowable Emissions", complete the following table for each permitted source and each pollutant for which fees are due for that source. See instructions for further details.

Source ID	Pollutant	Allowable or Actual Emissions	If allowable emissions: Specify condition number and limit. If actual emissions: Describe calculation method and provide example. Provide condition number that specifies method, if applicable.

8. (Continued)

Source ID	Pollutant	Allowable or Actual Emissions	If allowable emissions: Specify condition number and limit. If actual emissions: Describe calculation method and provide example. Provide condition number that specifies method, if applicable.

CONTACT INFORMATION (BILLING)

9. Billing contact			Phone number with area code
Mailing address (St./Rd./Hwy.)			Fax number with area code
City	State	Zip code	**Email address**

SIGNATURE BY RESPONSIBLE OFFICIAL

Based upon information and belief formed after reasonable inquiry, I, as the responsible person of the above-mentioned facility, certify that the information contained in the submittal is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

10. Signature		Date
Signer's name (type or print)	**Title**	Phone number with area code