



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
LORAIN COUNTY**

CERTIFIED MAIL

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov.
Center

Application No: 02-11888

DATE: 3/8/2001

Republic Technologies International
Mark Conti
1807 East 28th St
Lorain, OH 44055

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

NEDO



**Permit To Install
Terms and Conditions**

**Issue Date: 3/8/2001
Effective Date: 3/8/2001**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 02-11888

Application Number: 02-11888
APS Premise Number: 0247080229
Permit Fee: **\$2200**
Name of Facility: Republic Technologies International
Person to Contact: Mark Conti
Address: 1807 East 28th St
Lorain, OH 44055

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1807 East 28th St
Lorain, Ohio**

Description of proposed emissions unit(s):
Administrative modification to PTI 02-11888, issued May 6, 1998 to increase leaded steel production.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Record keeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or record keeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.11 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, record keeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition

declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the 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 federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are

required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Source Operation and Operating Permit Requirements After Completion of Construction

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Record keeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

5. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

6. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

7. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

8. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

9. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

10. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|--|
| PE | 27.48 |
| PM ₁₀ | 21.38 (12.74 - Net Emission Increase) |
| Lead | 0.569 |

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Applicable Emissions
Limitations/Control
Measures

Fabric filter dust collector
PE - 0.002 gr/dscf
(see Section A.II.1 and
A.II.2)

PE - 19.26 lbs/hr,
17.89 tpy

PM₁₀ - 8.72 lbs/hr,
13.27 tpy

Lead - 0.0712 lb/hr,
0.067 tpy

Visible particulate emission
limitations
(see Sections A.I.2.a, A.I.2.b
and A.I.2.c)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Section A.I.2.a)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Sections A.I.2.b and A.I.2.c)

The emission limitation

specified by this rule is less stringent
than the emission limitation
established pursuant to OAC rule
3745-31-05(A)(3)

The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3)

2. Additional Terms and Conditions

- 2.a Particulate emissions captured by the fume collection system for the No. 2 continuous bloom caster shall be exhausted to a fabric filter dust collector during leaded steel production. Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.
- 2.b Visible particulate emissions of fugitive dust from all operations associated with the No. 2 continuous bloom caster including the addition of fluxes, tundish and ladle slag dumping, caster pouring and cast steel cut-off torches shall not exceed five percent opacity as a six-minute average.
- 2.c Visible particulate emissions of fugitive dust from the No. 2 continuous bloom caster during the initial tundish filling period, continuous casting of leaded steel, and initial cooling of the tundish shall not exceed five percent opacity as a six-minute average.

II. Operational Restrictions

- 1. The permittee shall employ **a refractory shroud and a tundish cover** to minimize or eliminate visible particulate emissions of fugitive dust from molten steel transfers between the steel ladle and tundish.
- 2. The permittee shall employ the following particulate emission control systems:
 - a. A ladle cover shall be used at all times to minimize or eliminate visible particulate emissions of fugitive dust during ladle transfer of molten leaded steel from the No. 2 ladle metallurgy facility to the caster.
 - b. During leaded steel casting, a fume collection system consisting of an evacuated ladle cover and close fitting hood over the tundish shall be installed to minimize or eliminate visible particulate emissions of fugitive dust. A close fitting hood shall be installed over the tundish to minimize visible particulate emissions of fugitive dust during initial tundish cooling. The collection system shall be designed to capture particulate and lead emissions from the molten leaded steel ladle and during initial tundish cooling.
- 3. The pressure drop across the No. 2 continuous bloom caster fabric filter dust collector shall be maintained within the range of 1.0 to 6.0 inches of water while the emissions unit is in operation.
- 4. The permittee shall restrict the production of leaded steel to 330,000 tons per year based upon a rolling 365-day period.

- 5. The permittee shall restrict steel throughput for the No. 2 ladle metallurgy facility and the No. 2 continuous bloom caster to 1,200,000 tons per year, based upon a consecutive 365-day period, rolled on a daily basis. This restriction was required through a consent decree and was part of the original Permit to Install No. 02-7768, issued May 12, 1994 and modified July 26, 1995. Quarterly reports have been submitted since July 1, 1996 to demonstrate compliance with this limit.

III. Monitoring and/or Record keeping Requirements

- 1. The permittee shall maintain records of the daily and 365-day summation of leaded steel production from the facility. In addition, the permittee shall continue to maintain individual source daily and 365-day summations of the steel throughput production records for the No. 2 ladle metallurgy facility and the No. 2 continuous bloom caster to document compliance with the limitations specified herein.
- 2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the No. 2 continuous bloom caster fabric filter dust collector while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter dust collector on a once per week basis.
- 3. The permittee shall develop a formal operation and maintenance program for the No. 2 continuous bloom caster fabric filter dust collector which shall include, at a minimum, an inspection frequency of once per month.
- 4. The permittee shall perform inspections of the fume collection system used to minimize or eliminate visible particulate emissions of fugitive dust from the tundish. The fume collection system consisting of an evacuated ladle cover, close fitting hood over the tundish, ductwork and fan shall be inspected in accordance with the following frequencies:

| | |
|--|------------------------------|
| fan and fugitive dust capture system | minimum inspection frequency |
| evacuated ladle cover, hood, ductwork and fan | monthly |

- 5. The purpose of the inspections is to ensure that the collection and control efficiency provided by the fan, fugitive dust capture system and fabric filter dust collector is sufficient to minimize or eliminate visible particulate emissions of fugitive dust to the extent possible with good engineering design and to comply with the particulate emission limitation for the tundish. The inspections shall be performed during representative, normal operating conditions.
- 6. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less

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frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

7. The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the dates of each inspection where it was determined by the permittee that it was necessary to perform maintenance or repair the fan, fugitive dust capture system or fabric filter dust collector;
 - c. the date that any repair or maintenance of the fan, fugitive dust capture system or fabric filter dust collector was performed.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports which shall include records of the daily leaded steel production from the facility. The quarterly reports shall also include records of the leaded steel production for the preceding consecutive 365-day period, rolled on a daily basis. In addition, the permittee shall submit quarterly reports including individual daily steel throughput records for the No. 2 continuous bloom caster and total steel throughput records for the preceding consecutive 365-day periods, rolled on a daily basis.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 365-day leaded steel production limitation for the facility.
3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 365-day steel throughput restriction for the No. 2 continuous bloom caster.
4. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the No. 2 continuous bloom caster fabric filter dust collector did not comply with the allowable range specified above.
5. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each month during which an inspection was not performed by the required frequency; and
 - b. each instance when maintenance or repair of the fan, fugitive dust capture system or fabric filter dust collector, that was to be performed as a result of an inspection, was not performed.

Issued

Emissions Unit ID: F011

6. The quarterly production reports and deviation reports shall be submitted in accordance with Section A.1. of Part I of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emissions limitation(s) in Section A.I of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:
Fabric filter dust collector
PE - 0.002 gr/dscf

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance by testing the No. 2 continuous bloom caster fabric filter dust collector in accordance with OAC rule 3745-17-03(B)(10).

- b. Emission Limitation:
PE - 19.26 lbs/hr, 17.89 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- c. Emission Limitation:
PM₁₀ - 8.72 lbs/hr, 13.27 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- d. Emission Limitation:
Lead - 0.0712 lb/hr, 0.067 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and

calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- e. Emission Limitation:
Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.
- Applicable Compliance Method:
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).
- f. Emission Limitation:
Visible particulate emissions of fugitive dust from all operations associated with the No. 2 continuous bloom caster including the addition of fluxes, tundish and ladle slag dumping, caster pouring and cast steel cut-off torches shall not exceed five percent opacity as a six-minute average.
- Applicable Compliance Method:
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC Rule 3745-17-03(B)(3)(b). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.
- g. Emission Limitation:
Visible particulate emissions of fugitive dust from the No. 2 continuous bloom caster during the ladle transfer of molten leaded steel to the caster, the initial tundish filling period, continuous casting of leaded steel, and initial cooling of the tundish shall not exceed five percent opacity as a six-minute average.
- Applicable Compliance Method:
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC Rule 3745-17-03(B)(3)(b). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

Issued

Emissions Unit ID: F011

- h. If required, the permittee shall conduct, or have conducted, emission testing of the No. 2 continuous bloom caster fabric filter dust collector in accordance with the following requirements:
- i. The emission testing shall be conducted within 60 days after notification by the Ohio EPA that an emission test is required.
 - ii. The emission testing shall be conducted to demonstrate compliance with the allowable **particulate concentration**.
 - iii. The following test method shall be employed to demonstrate compliance with the allowable **particulate concentration**: Method 5 of 40 CFR, Part 60, Appendix A.
 - iv. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test.

Personnel from the Ohio EPA Northeast District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
|---|--------------------------------------|--|

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> |
|--|--|
| P080 - No. 2 ladle metallurgy facility (administrative modification) | OAC rule 3745-31-05(A)(3) OAC rule 3745-17-07(B)(1) |
| | OAC rule 3745-17-08(B) |
| | OAC rule 3745-17-11 |
| | OAC rule 3745-17-07(A)(1) |

Applicable Emissions
Limitations/Control
Measures

Fabric filter dust collectors,
No. 2 ladle arc furnace
PE - 0.002 gr/dscf
(see Section A.II.1 and
A.II.2)

Fabric filter dust collectors,
bulk alloy handling system
PE - 0.0052 gr/dscf
(see Section A.II.3)

PE - 6.60 lbs/hr,
7.77 tpy

PM₁₀ - 5.43 lbs/hr,
6.42 tpy

Lead - 0.577 lb/hr,
0.397 tpy

Visible particulate emission
limitations
(see Sections A.I.2.a, A.I.2.b
and A.I.2.c A.I.2.d)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Sections A.I.2.c and A.I.2.d)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Sections A.I.2.a and A.I.2.b)

The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3)

The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3)

2. Additional Terms and Conditions

- 2.a** Visible particulate emissions of fugitive dust from the No. 2 ladle metallurgy facility shall not exceed five percent opacity as a six-minute average.
- 2.b** Visible particulate emissions of fugitive dust from the No. 2 ladle arc furnace during the lead injection operation shall not exceed five percent opacity as a six-minute average.
- 2.c** Particulate emissions captured by the fume collection system for the No. 2 ladle arc furnace shall be exhausted to a fabric filter dust collector. Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.
- 2.d** Particulate emissions captured by the dust collection systems for alloy handling, including the bulk alloy receiving, storage and transfer system and the alloy system conveyors and transfer points, shall be exhausted to fabric filter dust collectors. Visible particulate emissions from the fabric filter outlets shall not exceed five percent opacity as a six-minute average.

II. Operational Restrictions

- 1.** The No. 2 ladle metallurgy facility, including a ladle arc furnace and attached alloy handling system, has been installed with a water-cooled hood covering the ladle and fume collection systems capable of capturing generated emissions of particulate from the air contaminant source operation including bulk alloy material handling, alloy system conveyors and transfer points, and steel processing in the ladle arc furnace.
- 2.** The permittee shall employ and maintain the existing fume collection system for the No. 2 ladle arc furnace which shall capture particulate and lead emissions from the ladle lead injection operation.
- 3.** Particulate emissions captured by the dust collection systems for alloy handling, including the bulk alloy receiving, storage and transfer system and the alloy system conveyors and transfer points, shall be exhausted to fabric filter dust collectors.
- 4.** The pressure drop across the alloy handling systems fabric filter dust collectors shall be maintained within the range of 1.0 to **6.0** inches of water while the emissions unit is in operation.
- 5.** The pressure drop across the No.2 ladle arc furnace fabric filter dust collectors shall be maintained within the range of 4.0 to **12.0** inches of water while the emissions unit is in operation

6. The permittee shall restrict the production of leaded steel to 330,000 tons per year based upon a rolling 365-day period.
7. The permittee shall restrict steel throughput for the No. 2 ladle metallurgy facility and the No. 2 continuous bloom caster to 1,200,000 tons per year, based upon a consecutive 365-day period, rolled on a daily basis. This restriction was required through a consent decree and was part of the original Permit to Install No. 02-7768, issued May 12, 1994 and modified July 26, 1995. Quarterly reports have been submitted since July 1, 1996 to demonstrate compliance with this limit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall maintain records of the daily and 365-day summation of leaded steel production from the facility. In addition, the permittee shall continue to maintain individual source daily and 365-day summations of the steel throughput production records for the No. 2 ladle metallurgy facility and the No. 2 continuous bloom caster to document compliance with the limitations specified herein.
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the alloy handling system and No.2 ladle arc furnace fabric filter dust collectors while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter dust collectors on a once per **week** basis.
3. The permittee shall develop a formal operation and maintenance program for the bulk alloy handling system fabric filter dust collectors and the No. 2 ladle arc furnace fabric filter dust collectors which shall include, at a minimum, an inspection frequency of once per month.
4. The permittee shall perform inspections of the fume/dust collection systems used to minimize or eliminate visible particulate emissions of fugitive dust from the air contaminant source operation including bulk alloy receiving and storage, system conveyors and transfer points and steel processing in the No. 2 ladle arc furnace. The fume/dust collection systems including the hoods, ductwork and fans shall be inspected in accordance with the following frequencies:

| | |
|------------------------------|------------------------------|
| fume/dust collection systems | minimum inspection frequency |
| hoods, ductwork and fans | monthly |
5. The purpose of the inspections is to ensure that the collection and control efficiencies provided by the fans, fume/dust collection systems and fabric filter dust collectors are sufficient to minimize or

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eliminate visible particulate emissions of fugitive dust to the extent possible with good engineering design and to comply with the particulate emission limitations for the fabric filter dust collectors. The inspections shall be performed during representative, normal operating conditions.

6. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
7. The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the dates of each inspection where it was determined by the permittee that it was necessary to perform maintenance or repair a fan, fume/dust collection system or fabric filter dust collector;
 - c. the date that any repair or maintenance of a fan, fume/dust collection system or fabric filter dust collector was performed.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports which shall include records of the daily leaded steel production from the facility. The quarterly reports shall also include records of the leaded steel production for the preceding consecutive 365-day period, rolled on a daily basis. In addition, the permittee shall submit quarterly reports including individual daily steel throughput records for the No. 2 ladle metallurgy facility and total steel throughput records for the preceding consecutive 365-day periods, rolled on a daily basis.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 365-day leaded steel production limitation for the facility.
3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 365-day steel throughput restriction for the No. 2 ladle metallurgy facility.
4. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the alloy handling system and No.2 ladle arc furnace fabric filter dust collectors did not comply with the allowable ranges specified above.
5. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each month during which an inspection was not performed by the required frequency; and
 - b. each instance when maintenance or repair of a fan, fume/dust collection system or fabric filter dust collector, that was to be performed as a result of an inspection, was not performed.

6. The quarterly production reports and deviation reports shall be submitted in accordance with Section A.1. of Part I of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emissions limitation(s) in Section A.I of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

Fabric filter dust collectors,

No. 2 ladle arc furnace

PE - 0.002 gr/dscf and an overall particulate emission control efficiency of at least 94.6%.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance by testing the No. 2 ladle arc furnace control system inlet and fabric filter dust collector stacks in accordance with OAC rule 3745-17-03(B)(10)(b) and (B)(10)(a), respectively.

b. Emission Limitation:

Fabric filter dust collectors,

bulk alloy handling system

PE - 0.0052 gr/dscf

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance by testing the alloy handling system fabric filter dust collectors in accordance with OAC rule 3745-17-03(B)(10).

c. Emission Limitation:

PE - 6.60 lbs/hr, 7.77 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

d. Emission Limitation:

PM₁₀ - 5.43 lbs/hr, 6.42 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- e. Emission Limitation:
Lead - 0.577 lb/hr, 0.397 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- f. Emission Limitation:
Visible particulate emissions of fugitive dust from the No. 2 ladle metallurgy facility shall not exceed five percent opacity as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC Rule 3745-17-03(B)(3)(b). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

- g. Emission Limitation:
Visible particulate emissions of fugitive dust from the No. 2 ladle arc furnace during the lead injection operation shall not exceed five percent opacity as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC Rule 3745-17-03(B)(3)(b). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

- h. Emission Limitation:

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Particulate emissions captured by the fume collection system for the No. 2 ladle arc furnace shall be exhausted to a fabric filter dust collector. Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

i. **Emission Limitation:**

Particulate emissions captured by the dust collection systems for alloy handling, including the bulk alloy receiving, storage and transfer system and the alloy system conveyors and transfer points, shall be exhausted to fabric filter dust collectors. Visible particulate emissions from the fabric filter outlets shall not exceed five percent opacity as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

j. If required, the permittee shall conduct, or have conducted, emission testing of the alloy handling system and/or No.2 ladle arc furnace fabric filter dust collectors in accordance with the following requirements:

- i. The emission testing shall be conducted within 60 days after notification by the Ohio EPA that an emission test is required.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable **particulate concentration**.
- iii. The following test method shall be employed to demonstrate compliance with the allowable **particulate concentration**: Method 5 of 40 CFR, Part 60, Appendix A.
- iv. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. Failure to submit such notification for review and

approval prior to the test may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test.

Personnel from the Ohio EPA Northeast District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
|---|--------------------------------------|--|

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> |
|---|--------------------------------------|
| P085 - Caster torch cut-off operation (administrative modification) | OAC rule 3745-31-05(A)(3) |
| | OAC rule 3745-17-11 |
| | OAC rule 3745-17-07(A)(1) |
| | OAC rule 3745-17-07(B)(1) |
| | OAC rule 3745-17-08(B) |

Applicable Emissions
Limitations/Control
Measures

Fabric filter dust collector
PE - 0.002 gr/dscf
(see Section A.II.1 and
A.II.2))

PE - 1.39 lbs/hr,
1.18 tpy

PM₁₀ - 1.34 lbs/hr,
1.14 tpy

Lead - 0.0712 lb/hr,
0.067 tpy

Visible particulate emission
limitations
(see Sections A.I.2.a and
A.I.2.b)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Section A.I.2.b)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Section A.I.2.a)

The emission limitation

specified by this rule is less stringent
than the emission limitation
established pursuant to OAC rule
3745-31-05(A)(3)

The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3)

2. Additional Terms and Conditions

- 2.a Visible particulate emissions of fugitive dust from caster torch cut-off operations shall not exceed five percent opacity as a six-minute average.
- 2.b Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.

II. Operational Restrictions

1. A fume collection system consisting of a close fitting hood over the caster cut-off torches shall be installed to minimize or eliminate visible particulate emissions of fugitive dust generated during leaded steel caster torch cut-off operations. The collection system shall be designed to capture particulate and lead emissions from the leaded steel caster torch cut-off operation.
2. Particulate emissions captured by the fume collection system for the leaded steel caster torch cut-off operation shall be exhausted to a fabric filter dust collector.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall develop a formal operation and maintenance program for the leaded steel caster torch cut-off fabric filter dust collector which shall include, at a minimum, an inspection frequency of once per month.
2. The permittee shall perform inspections of the fume collection system used to minimize or eliminate visible particulate emissions of fugitive dust from the caster cut-off torches. The fume collection system consisting of a close fitting hood, ductwork and fan shall be inspected in accordance with the following frequencies:

| | |
|---|------------------------------|
| fume collection system for the caster cut-off torches | minimum inspection frequency |
|---|------------------------------|

| | |
|------------------------|---------|
| hood, ductwork and fan | monthly |
|------------------------|---------|

3. The purpose of the inspections is to ensure that the collection and control efficiency provided by the fan, fume collection system and fabric filter dust collector is sufficient to minimize or eliminate visible particulate emissions of fugitive dust to the extent possible with good engineering design and to comply with the particulate emission limitation for the caster cut-off torches. The inspections shall be performed during representative, normal operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District

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Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

5. The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the dates of each inspection where it was determined by the permittee that it was necessary to perform maintenance or repair the fan, fume collection system or fabric filter dust collector;
 - c. the date that any repair or maintenance of the fan, fume collection system or fabric filter dust collector was performed.

IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each month during which an inspection was not performed by the required frequency; and
 - b. each instance when maintenance or repair of the fan, fume collection system or fabric filter dust collector, that was to be performed as a result of an inspection, was not performed.
2. The deviation reports shall be submitted in accordance with Section A.1. of Part I of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emissions limitation(s) in Section A.I of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
Fabric filter dust collector,
PE - 0.002 gr/dscf

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance by testing the leaded steel caster torch cut-off fabric filter dust collector in accordance with OAC rule 3745-17-03(B)(10).
 - b. Emission Limitation:
PE - 1.39 lbs/hr, 1.18 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- c. Emission Limitation:
PM₁₀ - 1.34 lbs/hr, 1.14 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- d. Emission Limitation:
Lead - 0.0712 lb/hr, 0.067 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- e. Emission Limitation:
Visible particulate emissions of fugitive dust from caster torch cut-off operations shall not exceed five percent opacity as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC Rule 3745-17-03(B)(3)(b). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

- f. Emission Limitation:
Visible particulate emissions from the fabric filter dust collector outlet shall not exceed

five percent opacity as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

- g. If required, the permittee shall conduct, or have conducted, emission testing of the leaded steel caster torch cut-off fabric filter dust collector in accordance with the following requirements:
- i. The emission testing shall be conducted within 60 days after notification by the Ohio EPA that an emission test is required.
 - ii. The emission testing shall be conducted to demonstrate compliance with the allowable **particulate concentration**.
 - iii. The following test method shall be employed to demonstrate compliance with the allowable **particulate concentration**: Method 5 of 40 CFR, Part 60, Appendix A.
 - iv. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test.

Personnel from the Ohio EPA Northeast District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requireme nts</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|--|
|---|---|--|

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | |
|--|--------------------------------------|------------------------|
| P086 - Final tundish cooling operation (administrative modification) | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-08(B) |
| | | OAC rule 3745-17-11 |
| | OAC rule 3745-17-07(A)(1) | |
| | OAC rule 3745-17-07(B)(1) | |

Applicable Emissions
Limitations/Control
Measures

Fabric filter dust collector
PE - 0.002 gr/dscf
(see Section A.II.1 and
A.II.2)

PE - 0.0002 lb/hr,
0.001 tpy

PM₁₀ - 0.0002 lb/hr,
0.001 tpy

Lead - 0.000011 lb/hr,
0.000034 tpy

Visible particulate emission
limitations
(see Sections A.I.2.a and
A.I.2.b)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Sections A.I.2.b)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Sections A.I.2.a)

The emission limitation

specified by this rule is less stringent
than the emission limitation
established pursuant to OAC rule
3745-31-05(A)(3)

The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3)

2. Additional Terms and Conditions

- 2.a** Visible particulate emissions of fugitive dust from the final tundish cooling operation shall not exceed five percent opacity as a six-minute average during leaded steel production.
- 2.b** Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.

II. Operational Restrictions

- 1.** A fume collection system consisting of a close fitting hood over the tundish during the final cooling operation shall be installed to minimize or eliminate visible particulate emissions of fugitive dust. The collection system shall be designed to capture particulate and lead emissions from the final tundish cooling operation.
- 2.** Particulate emissions captured by the fume collection system for the final tundish cooling operation shall be exhausted to a fabric filter dust collector during leaded steel production.

III. Monitoring and/or Record keeping Requirements

- 1.** The permittee shall develop a formal operation and maintenance program for the final tundish cooling fabric filter dust collector which shall include, at a minimum, an inspection frequency of once per month.
- 2.** The permittee shall perform inspections of the fume collection system used to minimize or eliminate visible particulate emissions of fugitive dust from the final tundish cooling operation. The fume collection system consisting of a close fitting hood, ductwork and fan shall be inspected in accordance with the following frequencies:

| | |
|---|------------------------------|
| fume collection system for the final tundish cooling operation | minimum inspection frequency |
| hood, ductwork and fan | monthly |

- 3.** The purpose of the inspections is to ensure that the collection and control efficiency provided by the fan, fume collection system and fabric filter dust collector is sufficient to minimize or eliminate visible particulate emissions of fugitive dust to the extent possible with good engineering design and to comply with the particulate emission limitation for the final tundish cooling operation. The inspections shall be performed during representative, normal operating conditions.
- 4.** The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

5. The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the dates of each inspection where it was determined by the permittee that it was necessary to perform maintenance or repair the fan, fume collection system or fabric filter dust collector;
 - c. the date that any repair or maintenance of the fan, fume collection system or fabric filter dust collector was performed.

IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each month during which an inspection was not performed by the required frequency; and
 - b. each instance when maintenance or repair of the fan, fume collection system or fabric filter dust collector, that was to be performed as a result of an inspection, was not performed.
2. The deviation reports shall be submitted in accordance with Section A.1. of Part I of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emissions limitation(s) in Section A.I of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
Fabric filter dust collector,
PE - 0.002 gr/dscf

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance by testing the final tundish cooling fabric filter dust collector in accordance with OAC rule 3745-17-03(B)(10).
 - b. Emission Limitation:
PE - 0.0002 lb/hr, 0.001 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- c. **Emission Limitation:**
PM₁₀ - 0.0002 lb/hr, 0.001 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- d. **Emission Limitation:**
Lead - 0.000011 lb/hr, 0.000034 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- e. **Emission Limitation:**
Visible particulate emissions of fugitive dust from the final tundish cooling operation shall not exceed five percent opacity as a six-minute average during leaded steel production.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC Rule 3745-17-03(B)(3)(b). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

- f. **Emission Limitation:**
Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

- g. If required, the permittee shall conduct, or have conducted, emission testing of the final tundish cooling fabric filter dust collector in accordance with the following requirements:
- i. The emission testing shall be conducted within 60 days after notification by the Ohio EPA that an emission test is required.
 - iii. The emission testing shall be conducted to demonstrate compliance with the allowable **particulate concentration**.
 - iii. The following test method shall be employed to demonstrate compliance with the allowable **particulate concentration**: Method 5 of 40 CFR, Part 60, Appendix A.
 - iv. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test.

Personnel from the Ohio EPA Northeast District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test.

VI. Miscellaneous Requirements

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Republic Technologies International

PTI Application: **02 11000**

Issued

Facility ID: **0247080229**

Emissions Unit ID: P086

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
|---|--------------------------------------|--|

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | |
|--|--------------------------------------|------------------------|
| P087 - Ladle slag dump station (administrative modification) | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-08(B) |
| | | OAC rule 3745-17-11 |
| | OAC rule 3745-17-07(A)(1) | |
| | OAC rule 3745-17-07(B)(1) | |

Applicable Emissions
Limitations/Control
Measures

Fabric filter dust collector
PE - 0.002 gr/dscf
(see Section A.II.1 and
A.II.2)

PE - 1.83 lbs/hr,
0.31 tpy

PM₁₀ - 1.37 lbs/hr,
0.23 tpy

Lead - 0.103 lb/hr,
0.0193 tpy

Visible particulate emission
limitations
(see Sections A.I.2.a and
A.I.2.b)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Sections A.I.2.b)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Sections A.I.2.a)

The emission limitation

specified by this rule is less stringent
than the emission limitation
established pursuant to OAC rule
3745-31-05(A)(3)

The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3)

2. Additional Terms and Conditions

- 2.a** Visible particulate emissions of fugitive dust from the ladle slag dump station shall not exceed five percent opacity as a six-minute average during leaded steel production.
- 2.b** Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.

II. Operational Restrictions

- 1.** A fume collection system consisting of an evacuated enclosure of the ladle slag dump station shall be installed to minimize or eliminate visible particulate emissions of fugitive dust. The collection system shall be designed to capture particulate and lead emissions from the ladle slag dump station.
- 2.** Particulate emissions captured by the fume collection system for the ladle slag dump station shall be exhausted to a fabric filter dust collector during leaded steel production.

III. Monitoring and/or Record keeping Requirements

- 1.** The permittee shall develop a formal operation and maintenance program for the ladle slag dump station fabric filter dust collector which shall include, at a minimum, an inspection frequency of once per month.
- 2.** The permittee shall perform inspections of the fume collection system used to minimize or eliminate visible particulate emissions of fugitive dust from the ladle slag dump station. The fume collection system consisting of an evacuated enclosure of the ladle slag dump station, ductwork and fan shall be inspected in accordance with the following frequencies:
- | | |
|--------------------------------|------------------------------|
| fume collection system for the | minimum inspection frequency |
| ladle slag dump station | |
| enclosure, ductwork and fan | monthly |
- 3.** The purpose of the inspections is to ensure that the collection and control efficiency provided by the fan, fume collection system and fabric filter dust collector is sufficient to minimize or eliminate visible particulate emissions of fugitive dust to the extent possible with good engineering design and to comply with the particulate emission limitation for the ladle slag dump station. The inspections shall be performed during representative, normal operating conditions.
- 4.** The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less

frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

5. The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the dates of each inspection where it was determined by the permittee that it was necessary to perform maintenance or repair the fan, fume collection system or fabric filter dust collector;
 - c. the date that any repair or maintenance of the fan, fume collection system or fabric filter dust collector was performed.

IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each month during which an inspection was not performed by the required frequency; and
 - b. each instance when maintenance or repair of the fan, fume collection system or fabric filter dust collector, that was to be performed as a result of an inspection, was not performed.
2. The deviation reports shall be submitted in accordance with Section A.1. of Part I of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emissions limitation(s) in Section A.I of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
Fabric filter dust collector,
PE - 0.002 gr/dscf

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance by testing the ladle slag dump station fabric filter dust collector in accordance with OAC rule 3745-17-03(B)(10).
 - b. Emission Limitation:
PE - 1.83 lbs/hr, 0.31 tpy

Applicable Compliance Method:
Compliance shall be based on a calculation by using emission factors developed from

actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- c. Emission Limitation:
PM₁₀ - 1.37 lbs/hr, 0.23 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- d. Emission Limitation:
Lead - 0.103 lb/hr, 0.0193 tpy

Applicable Compliance Method:

Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."

- e. Emission Limitation:
Visible particulate emissions of fugitive dust from the ladle slag dump station shall not exceed five percent opacity as a six-minute average during leaded steel production.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC Rule 3745-17-03(B)(3)(b). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

- f. Emission Limitation:
Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

- g. If required, the permittee shall conduct, or have conducted, emission testing of the ladle slag dump station fabric filter dust collector in accordance with the following requirements:
- i. The emission testing shall be conducted within 60 days after notification by the Ohio EPA that an emission test is required.
 - ii. The emission testing shall be conducted to demonstrate compliance with the allowable **particulate concentration**.
 - iii. The following test method shall be employed to demonstrate compliance with the allowable **particulate concentration**: Method 5 of 40 CFR, Part 60, Appendix A.
 - iv. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test.

Personnel from the Ohio EPA Northeast District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
|---|--------------------------------------|--|

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Applicable Emissions
Limitations/Control
Measures

Fabric filter dust collector
PE - 0.002 gr/dscf
(see Section A.II.1 and
A.II.2)

PE - 2.88 lbs/hr,
0.33 tpy

PM₁₀ - 2.88 lbs/hr,
0.33 tpy

Lead - 0.146 lb/hr,
0.0183 tpy

Visible particulate emission
limitations
(see Sections A.I.2.a and
A.I.2.b)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Section A.I.2.b)

The emission limitation
specified by this rule is less
stringent than the emission
limitation established
pursuant to OAC rule
3745-31-05(A)(3) (see
Section A.I.2.a)

The emission limitation

specified by this rule is less stringent
than the emission limitation
established pursuant to OAC rule
3745-31-05(A)(3)

The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3)

2. Additional Terms and Conditions

- 2.a Visible particulate emissions of fugitive dust from the ladle spout oxygen lancing operation shall not exceed five percent opacity as a six-minute average during leaded steel production.
- 2.b Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.

II. Operational Restrictions

- 1. A fume collection system consisting of a hood over the ladle spout oxygen lancing work area shall be installed to minimize or eliminate visible particulate emissions of fugitive dust. The collection system shall be designed to capture particulate and lead emissions from the ladle spout oxygen lancing operation.
- 2. Particulate emissions captured by the fume collection system for the ladle make-up station shall be exhausted to a fabric filter dust collector during leaded steel production.
- 3. The pressure drop across the ladle make-up station fabric filter dust collector shall be maintained within the range of **5.0** to **13.0** inches of water while the emissions unit is in operation.

III. Monitoring and/or Record keeping Requirements

- 1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the ladle make-up station fabric filter dust collector while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter dust collector on a once per **week** basis.
- 2. The permittee shall develop a formal operation and maintenance program for the ladle make-up station fabric filter dust collector which shall include, at a minimum, an inspection frequency of once per month.
- 3. The permittee shall perform inspections of the fume collection system used to minimize or eliminate visible particulate emissions of fugitive dust from the ladle make-up station. The fume collection system consisting of a hood, ductwork and fan shall be inspected in accordance with the following frequencies:

fume collection system for the

minimum inspection frequency

ladle make-up station

hood, ductwork and fan

monthly

4. The purpose of the inspections is to ensure that the collection and control efficiency provided by the fan, fume collection system and fabric filter dust collector is sufficient to minimize or eliminate visible particulate emissions of fugitive dust to the extent possible with good engineering design and to comply with the particulate emission limitation for the ladle make-up station. The inspections shall be performed during representative, normal operating conditions.

5. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

6. The permittee shall maintain records of the following information:

- a. the date and reason any required inspection was not performed;
- b. the dates of each inspection where it was determined by the permittee that it was necessary to perform maintenance or repair the fan, fume collection system or fabric filter dust collector;
- c. the date that any repair or maintenance of the fan, fume collection system or fabric filter dust collector was performed.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the ladle make-up station fabric filter dust collector did not comply with the allowable range specified above.

2. The permittee shall submit deviation reports that identify any of the following occurrences:

- a. each month during which an inspection was not performed by the required frequency; and
- b. each instance when maintenance or repair of the fan, fume collection system or fabric filter dust collector, that was to be performed as a result of an inspection, was not performed.

3. The deviation reports shall be submitted in accordance with Section A.1. of Part I of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emissions limitation(s) in Section A.I of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
Fabric filter dust collector,
PE - 0.002 gr/dscf

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance by testing the ladle make-up station fabric filter dust collector in accordance with OAC rule 3745-17-03(B)(10).
 - b. Emission Limitation:
PE - 2.88 lbs/hr, 0.33 tpy

Applicable Compliance Method:
Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."
 - c. Emission Limitation:
PM₁₀ - 2.88 lbs/hr, 0.33 tpy

Applicable Compliance Method:
Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and Attachment 1- Lead Emission Factors and Calculations."
 - d. Emission Limitation:
Lead - 0.146 lb/hr, 0.0183 tpy

Applicable Compliance Method:
Compliance shall be based on a calculation by using emission factors developed from actual production data, field measurements and sample results. The emission factors and calculations were presented in the permit application as an addendum entitled "Determination of Net Emissions and Emission Rates for 1.2MM TPY of Cast Steel and

Attachment 1- Lead Emission Factors and Calculations."

- e. Emission Limitation:
Visible particulate emissions of fugitive dust from the ladle spout oxygen lancing operation shall not exceed five percent opacity as a six-minute average during leaded steel production.
- Applicable Compliance Method:
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC Rule 3745-17-03(B)(3)(b). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.
- f. Emission Limitation:
Visible particulate emissions from the fabric filter dust collector outlet shall not exceed five percent opacity as a six-minute average.
- Applicable Compliance Method:
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).
- g. If required, the permittee shall conduct, or have conducted, emission testing of the ladle make-up station fabric filter dust collector in accordance with the following requirements:
- i. The emission testing shall be conducted within 60 days after notification by the Ohio EPA that an emission test is required.
 - ii. The emission testing shall be conducted to demonstrate compliance with the allowable **particulate concentration**.
 - iii. The following test method shall be employed to demonstrate compliance with the allowable **particulate concentration**: Method 5 of 40 CFR, Part 60, Appendix A.
 - iv. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an

Issued

Emissions Unit ID: P088

"Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test.

Personnel from the Ohio EPA Northeast District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
|---|--------------------------------------|--|

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None