PROPOSED CAAPP PERMIT
July 21, 2009

217/782-2113

"REVISED"
CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT

PERMITTEE

Alton Steel, Inc.
Attn: D. Jeannine Kelly, Director of Regulatory Compliance
#5 Cut Street
Alton, Illinois 62002

I.D. No.: 119010AAE
Application No.: 96020056

Date Received: February 15, 1996
Date Issued: May 13, 2008
Expiration Date[1]: May 13, 2013

Operation of: Alton Steel, Inc., Steel Mill
Source Location: #5 Cut Street, Alton, Madison County, 62002
Responsible Official: Michael J. Fitch, President & CEO

This permit is hereby granted to the above-designated Permittee to operate a Steel Mill, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

Revision Date Received: April 25, 2008
Revision Date Issued:
Purpose of Revision: Significant Modification

This significant modification includes proposed schedule for steps necessary to determine compliance strategies for meeting the June 30, 2008 deadline to meet the requirements for the control of contaminants from scrap and the December 28, 2010 deadline to meet opacity limits in 40 CFR 63.10686(b)(2) and submitting a PM CAM plan for the EAF #7 and #8 for the NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities. ASI has added a new 550 gallon gasoline tank and removed the 1000 gallon gasoline tank and which is now subject to 40 CFR 63 Subpart CCCCCC NESHAP for area sources. Any other changes to this permit were typing/duplicate type errors that were corrected.

If you have any questions concerning this permit, please contact LeeAnne Kinsella at 217/782-2113.

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

ECB:LAK:psj

cc: Illinois EPA, FOS Region 3
CES
Lotus Notes

1 Except as provided in Conditions 1.5 and 8.7 of this permit.

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1.0 INTRODUCTION

1.1 Source Identification

Alton Steel, Inc.
#5 Cut Street
Alton, Illinois 62002
618/463-4490 Ext. 2533

I.D. No.: 119 010 AAE
County: Madison
Standard Industrial Classification: 3311, Electric Arc Furnaces

1.2 Owner/Parent Company

Alton Steel, Inc.
#5 Cut Street
Alton, Illinois 62002

1.3 Operator

Alton Steel, Inc.
#5 Cut Street
Alton, Illinois 62002

D. Jeannine Kelly, Director of Regulatory Compliance
618/374-3533

1.4 Source Description

The source is located at #5 Cut Street in Alton, Illinois. The source is a “mini-mill” steel mill which includes a melt shop and a rolling mill. The melt shop takes scrap steel and produces blooms and slabs which can be sold as semi-finished product to customers. The blooms are also used as feedstock in the rolling mill.

Note: This narrative description is for informational purposes only and is not enforceable.

1.5 Title I Conditions

As generally identified below, this CAAPP permit contains certain conditions for emission units at this source that address the applicability of permitting programs for the construction and modification of sources, which programs were established pursuant to Title I of the Clean Air Act (CAA) and regulations thereunder. These programs include PSD and MSSCAM, and are implemented by the Illinois EPA pursuant to Sections 9, 9.1, 39(a) and 39.5(7)(a) of the Illinois Environmental Protection Act (Act). These conditions continue in effect, notwithstanding the expiration date specified on the first page of this permit, as their authority derives from Titles I and V of the CAA, as well as Titles II and X of the Act. (See also Condition 8.7.)

a. This permit contains Title I conditions that reflect Title I requirements established in permits previously issued for this source, which conditions are specifically designated as “T1”.

b. This permit contains Title I conditions that are newly established in this CAAPP permit, which conditions are specifically designated as “T1N”.

2.0 LIST OF ABBREVIATIONS AND ACRONYMS COMMONLY USED

ACMA	Alternative Compliance Market Account
Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ATU	Allotment Trading Unit
BACT	Best Available Control Technology
BAT	Best Available Technology
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
ERMS	Emissions Reduction Market System
HAP	Hazardous Air Pollutant
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
ILCS	Illinois Compiled Statutes
Illinois EPA	Illinois Environmental Protection Agency
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MSSCAM	Major Stationary Sources Construction and Modification (35 IAC 203, New Source Review for non-attainment areas)
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 microns as measured by applicable test or monitoring methods
PSD	Prevention of Significant Deterioration (40 CFR 52.21, New Source Review for attainment areas)
RMP	Risk Management Plan
SO_2	Sulfur Dioxide
T1	Title I – identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New – identifies Title I conditions that are being established in this permit
T1R	Title I Revised – identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOM	Volatile Organic Material

3.0 CONDITIONS FOR INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

None

3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

- Wastewater Treatment Plant
- Descaling
- Scrap Burning
- Bar Straightners
- Parts Washing Degreasers

3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons per year, provided the storage tank is not used for the storage of gasoline or any material listed as a HAP pursuant to Section 112(b) of the CAA [35 IAC 201.210(a)(10)].

Storage tanks of any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].

Gas turbines and stationary reciprocating internal combustion engines of between 112 kW and 1,118 kW (150 and 1,500 horsepower) power output that are emergency or standby units [35 IAC 201.210(a)(16)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b). Note: These activities are not required to be individually listed.

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.3.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322 (see Attachment 2) and 35 IAC Part 266. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

3.2.2 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or, if no odor nuisance exists, do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.2.3 For each open burning activity, the Permittee shall comply with 35 IAC Part 237, including the requirement to obtain a permit for open burning in accordance with 35 IAC 237.201, if necessary.

3.2.4 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 219.182.

3.2.5 For each storage tank that has a storage capacity greater than 946 liters (250 gallons) and, if no odor nuisance exists, that stores an organic material with a vapor pressure exceeding 2.5 psia at 70°F, the Permittee shall comply with the applicable requirements of 35 IAC 219.122, which requires use of a permanent submerged loading pipe, submerged fill, or a vapor recovery system.

3.3 Addition of Insignificant Activities

3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).

3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by

35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.

3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
7.1	Electric Arc Furnace No. 7 (currently in active use); Electric Arc Furnace No. 8 (currently on reserve status); Ladle Preheaters; Continuous Caster; Tundish Preheater; Tundish Dryer; Tundish Shakeout; Cutting Torches;	1965	EMS Baghouse
7.2	Ladle Metallurgy Furnace; Lime Silo; Lime Surge Bin;	1994	Baghouse and/or bin vents
7.3	14 inch Rolling Mill Reheat Furnace and Trial Bar Furnace; 14 inch Rolling Mill;	Jan/1968	None
7.4	550 Gallon Aboveground Gasoline Storage Tank;	Feb/2009	Submerge Fill
7.5 Vehicle Traffic	Paved/Unpaved Roads/Parking Lots (PM, PM_{10})	N/A	Water or Chemical Dust Suppressant as Needed for Unpaved Roads
7.5 Material Handling Fugitive Emissions	EAF/LMF Baghouse Dust; K061 Silo; Dust Loading Building (PM, PM_{10})	N/A	None
	Slag Handling (PM, PM_{10})	N/A	None
	Lime Silo and Lime Surge Bin Handling; (PM, PM_{10})	N/A	Silos: Bin Vents
	Scrap/Alloy Handling (PM, PM_{10})	N/A	None
	EAF Fugitives (PM, PM_{10})	N/A	None
	LMF Fugitives (PM, PM_{10})	N/A	None
	Caster Fugitives (PM, PM_{10})	N/A	None
	EAF/LMF Baghouse Dust (PM, PM_{10})	N/A	None
	Slag Handling (PM, PM_{10})	N/A	None
7.6 Fugitive Emissions	Concast Cooling Tower (PM, PM_{10})	Prior to 1972	None
	14″ Mill Cooling Tower (PM, PM_{10})	Prior to 1972	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
7.6 Fugitive Emissions	Concast Cooling Tower (PM, PM_{10})	Prior to 1972	None
	14″ Mill Cooling Tower (PM, PM_{10})	Prior to 1972	None

5.0 OVERALL SOURCE CONDITIONS

5.1 Applicability of Clean Air Act Permit Program (CAAPP)

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of CO, SO_2, PM, and NO_x emissions.

5.1.2 This permit is issued based on Alton Steel, Inc. not being a major source of HAPs. The source is a natural minor for HAPs.

5.1.3 For purposes of the CAAPP, Alton Steel, Inc. is considered a single source with Stein Steel Mill Services, Inc., I.D. No. 119010AEA, located at 25 Hull Lane, Alton, Illinois. The operators of Stein Service, Inc. has elected to obtain a separate CAAPP permits for its facility.

5.2 Area Designation

This permit is issued based on the source being located in an area that, as of the date of permit issuance, is designated nonattainment for the National Ambient Air Quality Standards for $PM_{2.5}$, Ozone and attainment or unclassifiable for all other criteria pollutants (CO, Lead, NO_x, PM_{10}, SO_2).

5.3 Source-Wide Applicable Provisions and Regulations

5.3.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions for Specific Emission Units) of this permit.

5.3.2 In addition, emission units at this source are subject to the following regulations of general applicability:

a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

b. Pursuant to 35 IAC 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, except as allowed by 35 IAC 212.123(b) and 212.124.

5.3.3 Fugitive Particulate Matter Operating Program

a. This source shall be operated under the provisions of an operating program prepared by the Permittee and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions [35 IAC 212.309(a)]. The

Permittee shall comply with the fugitive particulate matter operating program, submitted to the Illinois EPA and incorporated by reference into this permit, and any amendments to the program submitted pursuant to paragraph b below.

b. The operating program shall be amended from time to time by the Permittee so that the operating program is current. Such amendments shall be consistent with the requirements set forth by this Condition and shall be submitted to the Illinois EPA [35 IAC 212.312].

c. All normal traffic pattern roads and parking facilities located at this source shall be paved or treated with water, oils, or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils, or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program [35 IAC 212.306].

5.3.4 Ozone Depleting Substances

The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.3.5 Risk Management Plan (RMP)

Should this stationary source, as defined in 40 CFR 68.3, become subject to the federal regulations for Chemical Accident Prevention in 40 CFR Part 68, then the owner or operator shall submit the items below. This condition is imposed in this permit pursuant to 40 CFR 68.215(a)(2)(i) and (ii).

a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or

b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the RMP, as part of the annual compliance certification required by Condition 9.8.

5.3.6 Future Emission Standards

a. Should this stationary source become subject to a new or revised regulation under 40 CFR Parts 60, 61, 62, or 63, or 35 IAC Subtitle B after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by Condition 9.8. This permit may also have to be revised or reopened to address such new or revised regulations (see Condition 9.12.2).

b. This permit and the terms and conditions herein do not affect the Permittee's past and/or continuing obligation with respect to statutory or regulatory requirements governing major source construction or modification under Title I of the CAA. Further, neither the issuance of this permit nor any of the terms or conditions of the permit shall alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance.

5.3.7 Episode Action Plan

a. Pursuant to 35 IAC 244.141, 244.142, and 244.143, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144 and is incorporated by reference into this permit.

b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared by the Director of the Illinois EPA or his or her designated representative.

c. If an operational change occurs at the source which invalidates the plan, a revised plan shall be submitted to the Illinois EPA for review within 30 days of the change, pursuant to 35 IAC 244.143(d). Such plans shall be further revised if disapproved by the Illinois EPA.

5.4 Source-Wide Non-Applicability of Regulations of Concern

Source-wide non-applicability of regulations of concern are not set for this source. However, there are terms for unit specific non-applicability of regulations of concern set forth in Section 7 of this permit.

5.5 Source-Wide Control Requirements and Work Practices

Source-wide control requirements and work practices are not set for this source. However, there are requirements for unit specific control requirements and work practices set forth in Section 7 of this permit.

5.6 Source-Wide Production and Emission Limitations

5.6.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.6.1) are set for the purpose of establishing fees and are not federally enforceable (see Section 39.5(18) of the Act).

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	66.07
Sulfur Dioxide (SO_2)	277.25
Particulate Matter (PM)	103.47
Nitrogen Oxides (NO_x)	557.68
HAP, not included in VOM or PM	----
Total	1,004.47

5.6.2 Emissions of Hazardous Air Pollutants

Pursuant to Section 39.5(7)(a) of the Act, the emissions of HAPs from the source shall be less than 10 tons/year for each individual HAP and 25 tons/year for all HAPs combined.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

This condition is being imposed so that the source is not a major source of HAP emissions. The Permittee shall fulfill the applicable testing, recordkeeping, and reporting requirements of Conditions 5.7.2, 5.9.2, 5.9.3, and 5.10.2.

5.6.3 Other Source-Wide Production and Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to the federal rules for PSD, state rules for MSSCAM, or Section 502(b)(10) of the CAA. However, there are unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.7 Source-Wide Testing Requirements

5.7.1 Pursuant to 35 IAC 201.282 and Section 4(b) of the Act, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:

a. Testing by Owner or Operator: The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests [35 IAC 201.282(a)].

b. Testing by the Illinois EPA: The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary [35 IAC 201.282(b)].

c. Any such tests are also subject to the Testing Procedures of Condition 8.5 set forth in the General Permit Conditions of Section 8.

5.8 Source-Wide Monitoring Requirements

Source-wide monitoring requirements are not set for this source. However, there are provisions for unit specific monitoring set forth in Section 7 of this permit.

5.9 Source-Wide Recordkeeping Requirements

5.9.1 Annual Emission Records

The Permittee shall maintain records of total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit to demonstrate compliance with Condition 5.6.1, pursuant to Section 39.5(7)(b) of the Act.

5.9.2 Records for Source-Wide Control Requirements and Work Practices

a. The Permittee shall keep a copy of the fugitive particulate matter operating plan, and any amendments to the plan, as required by Condition 5.3. The Permittee shall also keep a record of activities completed according to the plan.

5.9.3 Records for HAP Emissions

a. The Permittee shall maintain records of individual and combined HAP emissions on a monthly and annual basis for the emission units covered by Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit to demonstrate compliance with Condition 5.6.2, pursuant to Section 39.5(7)(b) of the Act.

b. If testing is required by Condition 5.7.2, the Permittee shall keep records of the testing, including the test date, conditions, methodologies, calculations, test results.

5.9.4 Retention and Availability of Records

a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.10 Source-Wide Reporting Requirements

5.10.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the source with the permit requirements within 30 days, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken. There are also reporting requirements for unit specific emission units set forth in Section 7 of this permit.

5.10.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.11 Source-Wide Operational Flexibility/Anticipated Operating Scenarios

Source-wide operational flexibility is not set for this source. However, there are provisions for unit specific operational flexibility set forth in Section 7 of this permit.

5.12 Source-Wide Compliance Procedures

5.12.1 Procedures for Calculating Emissions

Except as provided in Condition 9.1.3, compliance with the source-wide emission limits specified in Condition 5.6 shall be addressed by the recordkeeping and reporting requirements of Conditions 5.9 and 5.10, and compliance procedures in Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit.

6.0 CONDITIONS FOR EMISSIONS CONTROL PROGRAMS

This section is reserved for emissions control programs. As of the date of issuance of this permit, there are no such programs applicable to this source.

7.0 UNIT SPECIFIC CONDITIONS FOR SPECIFIC EMISSION UNITS

7.1 Electric Melt Shop

7.1.1 Description

The Electric Melt Shop includes electric arc furnace No. 7 (EAF7) and electric arc furnace No. 8 (EAF8) with oxy-fuel burners, ladle preheaters and continuous caster (CC) that has a tundish preheater, tundish dryer, tundish shakeout and cutting torches. All are controlled by a ceiling canopy that vents to two EMS baghouses. The melting and refining stage of EAF7 and EAF8 are controlled by a direct evacuation control system that vents to the two EMS baghouses.

Note: This narrative description is for informational purposes only and is not enforceable.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
7.1	Electric Arc Furnace No. 7 (currently in active use); Electric Arc Furnace No. 8 (currently on reserve status); Ladle Preheaters; Continuous Caster; Tundish Preheater; Tundish Dryer; Tundish Shakeout; Cutting Torches;	1965	EMS Baghouse

7.1.3 Applicable Provisions and Regulations

a. The “affected Electric Melt Shop” for the purpose of these unit-specific conditions, are emission units described in Condition 7.1.2.

b. i. The total particulate matter emissions (filterable particulate, as would be measured in accordance with 35 IAC 212.110) from the EAF7 and EAF8 of the affected Electric Melt Shop including meltdown and refining, charging, tapping, slagging, electrode port leakage and ladle lancing shall not exceed the allowable emission rate specified by 35 IAC 212.321 (referenced in Attachment 2) [35 IAC 212.448].

ii. The Tundish Shakeout of the affected Electric Melt Shop is subject to the particulate matter limitations in which emissions enter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar

process emission units for which construction or modification commenced before April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.322].

iii. The opacity from the affected Electric Melt Shop is subject to 35 IAC 212.123, which provides that:

A. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122 [35 IAC 212.123(a)].

B. The emissions of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 1000 foot radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period [35 IAC 212.123(b)].

c. The emissions of sulfur dioxide into the atmosphere from each unit of the affected Electric Melt Shop shall not exceed 2000 PPM [35 IAC 214.301].

d. Malfunction and Breakdown Provisions

Subject to the following terms and conditions, the Permittee is authorized to continue operation of the affected Electric Melt Shop in violation of the applicable standards in Condition 7.1.3 in the event of a malfunction or breakdown of the affected Electric Melt Shop. This authorization is provided pursuant to 35 IAC 201.149, 201.161 and 201.262, as the Permittee has applied for such authorization in its application, generally explaining why such continued operation would be required to provide essential service or to prevent risk of injury to personnel or severe damage to equipment, and describing the measures that will be taken to minimize emissions from any malfunctions and breakdowns. This authorization supersedes the general prohibition in Condition 9.2.3 against continued operation in such circumstances.

i. This authorization only allows such continued operation as necessary to provide essential service

or prevent risk of injury to personnel or severe damage to equipment and does not extend to continued operation solely for the economic benefit of the Permittee.

ii. Upon occurrence of excess emissions due to malfunction or breakdown, the Permittee shall as soon as practical minimize material throughput of the affected Electric Melt Shop, repair the baghouse, remove the affected furnace from service or undertake other action so that excess emissions cease.

iii. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Conditions 7.1.9 and 7.1.10. For these purposes, time shall be measured from the start of a particular incident. The absence of excess emissions for a short period shall not be considered to end the incident if excess emissions resume. In such circumstances, the incident shall be considered to continue until corrective actions are taken so that excess emissions cease or the Permittee takes the affected Electric Melt Shop out of service.

iv. Following notification to the Illinois EPA of a malfunction or breakdown with excess emissions, the Permittee shall comply with all reasonable directives of the Illinois EPA with respect to such incident, pursuant to 35 IAC 201.263.

v. This authorization does not relieve the Permittee from the continuing obligation to minimize excess emissions during malfunction or breakdown. As provided by 35 IAC 201.265, an authorization in a permit for continued operation with excess emissions during malfunction and breakdown does not shield the Permittee from enforcement for any such violation and only constitutes a prima facie defense to such an enforcement action provided that the Permittee has fully complied with all terms and conditions connected with such authorization.

e. The affected electric arc furnaces 7 and 8 are subject to the NESHAP, 40 CFR 63 Subparts A: General Provisions and NESHAP, 40 CFR 63 Subpart YYYYY: Area Sources for Electric Arc Furnace Steelmaking Facilities (effective date December 28, 2007) because the source owns or operates a facility that is an area source of HAP emissions. The Illinois EPA is administering NESHAP in Illinois on behalf of the USEPA under a delegation agreement. The timeline for the initial notification, recordkeeping and reporting requirements as follows:

i. Initial compliance with NESHAP, 40 CFR 63 Subparts A and YYYYY: Area Sources for Electric Arc Furnace

Steelmaking Facilities (effective date December 28, 2007) the following timeline for notification, recordkeeping and reporting shall be followed for the existing electric arc furnaces:

A. Except as provided in paragraph 63.10681(b) of the rule, if you own or operate an existing affected source, you must achieve compliance with the applicable provisions of the rule by no later than June 30, 2008 [63.10681 (a)];

B. Compliance date for an area facility for HAPs for the opacity limit in 63.10686(b)(2) or (c)(2) shall be achieved no later than December 28, 2010, if the facility demonstrates to the satisfaction of the permitting authority that additional time is needed to install or modify emission control equipment.

7.1.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected Electric Melt Shop not being subject to the emission limit of 35 IAC 219.301, because their organic material emissions do not qualify as photochemically reactive material.

b. This permit is issued based on the EAF No. 7 not being subject to the NSPS, 40 CFR 60, Subpart AAa, because the furnace is an existing EAF.

c. This permit is issued based on the oxy-fuel burners, ladle preheaters, tundish preheater, tundish dryer, cutting torches and continuous caster of affected Electric Melt Shop not being subject to 35 IAC 216.121, because the oxy-fuel burners, ladle preheaters, tundish preheater, tundish dryer, cutting torches and continuous caster are not defined as fuel combustion emission units [35 IAC 211.2470].

d. This permit is issued based on the continuous caster of the affected Electric Melt Shop not being subject to 35 IAC 212.321 or 212.322 since it is subject to 35 IAC 212.450 [35 IAC 212.441].

7.1.5 Control Requirements and Work Practices

The terms and conditions identified below shall be followed to assure compliance, pursuant to Section 39.5(7)(a) of the Act.

a. The continuous caster of affected Electric Melt Shop is subject to 35 IAC 212.450 which states:

Particulate matter emissions from liquid steel charging in continuous casting operations shall be controlled by

chemical or mechanical shrouds or methods of comparable effectiveness [35 IAC 212.450].

b. i. The Permittee shall operate and maintain the various emission units in the Electric Melt Shop and associated control systems in accordance with good air pollution control practice to minimize emissions.

ii. For this purpose, the Permittee shall operate the affected furnaces and associated control systems in accordance with written operating procedures developed and maintained by the Permittee.

c. i. For each emission unit for the affected Electric Melt Shop and associated control systems, the Permittee shall perform operational inspections on at least a monthly basis of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

ii. This inspection need not be performed for each emission unit for the affected Electric Melt Shop if they are not operated at all during the month.

7.1.6 Production and Emission Limitations

In addition to Condition 5.3.2 and the source-wide emission limitations in Condition 5.6, the affected Electric Melt Shop is subject to the following:

a. i. Steel production of the Electric Melt Shop, determined as the output from the EAF7 and EAF8 of the affected Electric Melt Shop, shall not exceed 112 tons/hour and 750,000 tons/year [T1].

ii. Compliance with the hourly limit shall be determined as a daily average [T1].

iii. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

NOTE: The above limitations were established in Permit 00010015, pursuant to PSD. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for PSD [T1].

b. i. Emissions of particulate matter from the control devices for the EAF7 and EAF8 of the affected Electric Melt Shop shall not exceed 0.0052 gr/scf (filterable PM) and 3 percent opacity [T1].

ii. Emissions from the EAF7 and EAF8 of the affected Electric Melt Shop combined, shall not exceed the following limits (These limits are based on the production limits in Condition 7.1.6(a)):

Pollutant	Lbs/Ton	Lbs/Hour	Tons/Year
PM	0.19	21.4	75.2
PM_{10}	0.19	21.4	75.2
CO	2.00	224.0	750.0
NO_x	0.70	78.4	262.5
VOM	0.15	16.8	56.25
SO_2	0.63	70.6	236.25
Lead	0.0024	0.27	0.95

iii. Compliance with the hourly limit shall be determined as a daily average [T1].

iv. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

NOTE: The above limitations were established in Permit 00010015, pursuant to PSD. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for PSD [T1].

c. i. Emissions from the continuous caster shall not exceed the following limits. (These limits are based on the production allowed by Condition 7.1.6(a), a natural gas consumption rate of 140 cubic feet/ton of steel cast, and emission factors from USEPA's *Compilation of Air Pollutant Emission Factors*, AP-42, as supplied in the permit application):

Pollutant	Lbs/Ton	Lbs/Hour	Tons/Year
PM/PM_{10}	0.001	0.112	0.42
CO	0.012	1.32	4.62
NO_x	0.014	1.57	5.50

ii. This Permit is issued based on negligible emissions of SO_2 and VOM from the continuous caster. For this purpose, total emissions of SO_2 and VOM shall each not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year PSD [T1].

iii. This Permit is issued based on negligible emissions of lead from the continuous caster. For this purpose, total emissions of lead shall not exceed nominal emission rates of 0.005 lb/hour and 0.022 tons/year PSD [T1].

iv. Compliance with the hourly limit shall be determined as a daily average [T1].

v. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

NOTE: The above limitations were established in Permit 00010015, pursuant to PSD. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for PSD [T1].

7.1.7 a. Testing Requirements

i. A. By March 31, 2009, and at such other times as may be requested by the Illinois EPA, the Permittee shall have tests conducted for EAF No. 7 to measure emissions of PM/PM_{10}, SO_2, NO_x, CO, VOM, and lead from this furnace.

B. Within 120 days after achieving the maximum production rate at which EAF No. 8 will be operated but not later than 180 days after initially resuming operation of the furnace, and at such other times as may be requested by the Illinois EPA, the Permittee shall have emission test(s) conducted to measure emissions of PM/PM_{10}, SO_2, NO_x, CO, VOM, and lead from this furnace on an annual basis unless the Permittee follows the requirements listed in paragraph 7.1.7(c).

C. During these measurements of PM/PM_{10} emissions, observations of opacity shall also be conducted in accordance with Condition 7.1.7(b).

ii. A. These tests shall be conducted at the Permittee’s expense by an approved testing service during operating conditions that are representative of maximum emissions and the sampling time of each test run shall cover an integral number of heats or cycles of the furnace.

B. The following methods and procedures shall be used for testing emissions, provided however

that other appropriate test method developed by USEPA may be used for testing emissions of condensable PM or VOM if approved by the Illinois as part of the approval of the test plan. Refer to 40 CFR 60, Appendix A and 40 CFR 51, Appendix M for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Sulfur Dioxide	USEPA Method 6
Nitrogen Oxides	USEPA Method 7 or 7E
Carbon Monoxide	USEPA Method 10
PM/PM_{10}	USEPA Methods 5 or 5D* and 202
Volatile Organic Material	USEPA Method 18, 25 or 25A, as appropriate
Lead	USEPA Method 12 or 29

* For the EAFs, USEPA Method 5D, as appropriate for testing of positive-pressure baghouses, shall be used to determine the particulate matter concentration and volumetric flow rate of the effluent gas, the sample volume for each run shall be at least 4 dscm (160 dscf), and the sampling time shall be at least 4 hours.

iii. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review and approval. This plan shall describe the specific procedures for testing including at a minimum:

A. The person(s) who will be performing sampling and analysis and their experience with similar tests.

B. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum emissions, the levels of operating parameters at or within which compliance is intended to be shown, if parameters for the process and any control equipment will be determined.

C. The specific determination of emissions and operations which are intended to be made, including sampling and monitoring locations.

D. The test methods which will be used, with the specific analysis method.

E. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

F. A statement that the testing will be performed by a qualified independent testing service.

iv. A. Prior to carrying out these tests, the Illinois EPA shall be notified a minimum of 30 days prior to the scheduled date of these tests with the exact date, time and place of these tests, to enable the Illinois EPA to witness these tests.

B. If the scheduled date for the test is changed, the Permittee shall inform the Illinois EPA within five (5) working days of the scheduled test date and must specify the date and time of the rescheduled test.

v. A copy of the Final Reports for these tests and compliance status shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized.

b. Opacity Testing Requirements

i. The Permittee shall have the opacity from the openings of the building and the capture systems for the Electric Arc Furnace determined by a qualified observer in accordance with USEPA Method 9 while an affected furnace is operating, as further specified below.

ii. The duration of opacity observations for each test shall be taken during the entire stack test runs, the entire steelmaking cycle, from charge to tap of the furnace being tested.

iii. A. Upon written request by the Illinois EPA, additional opacity observations shall be conducted within 5 operating days at the Electric Melt Shop from the date of the request by the Illinois EPA or on the date agreed upon by the Illinois EPA, whichever is later. For such observations conducted pursuant to a request from the Illinois EPA:

1. The Permittee shall notify the Illinois EPA at least 24 hours in advance of the date and time of these observations, in order to enable the Illinois EPA to

witness the observations. This notification shall include the name and employer of the qualified observer(s).

2. The Permittee shall promptly notify the Illinois EPA of any changes in the time or date for observations.

3. The duration of these observations shall cover a complete heat or cycle of an affected furnace.

4. The Permittee shall provide a copy of the current certification for the opacity observer and observer's readings to the Illinois EPA at the time of the observations, if the Illinois EPA personnel are present.

c. Additional Testing Requirements:

i. The Permittee must perform a stack test during the third year and no more than 36 months following the previous stack test.

ii. If the stack test shows non-compliance with an emission limit specified in condition 7.1.6, the Permittee shall conduct annual stack tests for that pollutant until all stack tests for that pollutant over a three year period shows compliance.

7.1.8 Monitoring Requirements

a. INSTRUMENTATION:

i. The Permittee shall install, operate and maintain instrumentation for the following parameters of the capture system and baghouse(s) for the affected Electric Melt Shop.

A. Fan motor amperes; and

B. Furnace static pressure or ductwork static pressure prior to the baghouse(s).

b. OPACITY:

i. Observations of opacity shall be conducted on the following frequency unless absence of adequate daylight or weather conditions preclude scheduled observation, in which case, the next observations shall be conducted on the next operating day of the melt shop during which observations of opacity can reasonably be conducted in accordance with USEPA Method 9:

A. On a weekly basis (at least once every 7 operating days of the Electric Melt Shop) except as provided below.

B. On a daily basis (at least 5 days out of 7 operating days of the Electric Melt Shop) <u>if</u> any of the five previous observations measured opacity of 25 percent or more, continuing on a daily basis until the maximum opacities measured in five consecutive daily observations are all less than 25 percent, at which time observations on a weekly basis shall resume.

C. The duration of opacity observations for each test shall be at least 30 minutes (five 6-minute averages) unless no visible emissions are observed as determined by USEPA Method 22 or the average opacities for the first 12 minutes of observations (two six-minute averages) conducted for the point of release that displays the greatest opacity are both less than 10%.

ii. A. Upon written request by the Illinois EPA, additional opacity observations shall be conducted within 5 operating days by the Electric Melt Shop from the date of the request by the Illinois EPA or on the date agreed upon by the Illinois EPA, whichever is later. For such observations conducted pursuant to a request from the Illinois EPA:

1. The Permittee shall notify the Illinois EPA at least 24 hours in advance of the date and time of these observations, in order to enable the Illinois EPA to witness the observations. This notification shall include the name and employer of the qualified observer(s).

2. The Permittee shall promptly notify the Illinois EPA of any changes in the time or date for observations.

3. The duration of these observations shall cover a complete heat or cycle of an affected furnace.

4. The Permittee shall provide a copy of the current certification for the opacity observer and observer’s readings to the Illinois EPA at the time of the observations, if the Illinois EPA personnel are present.

c. INSPECTION:

If Condition 7.1.8(b)(i)(B) is triggered, an immediate inspection shall be performed as specified in condition 7.1.5(c)(i) and appropriate action taken, if required, to address the opacity upon completion of the heat.

d. Compliance Assurance Monitoring (CAM) Requirements:

The affected Electric Arc Furnaces are subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources. The Permittee shall comply with the monitoring requirements of the Compliance Assurance Monitoring (CAM) Plan described in Attachment 3, Table 3. Electric Arc Furnace pursuant to 40 CFR Part 64 as submitted in the Permittee's CAM plan application.

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected Electric Melt Shop to demonstrate compliance with Conditions 5.6.1, 7.1.3, 7.1.5 and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

a. Recordkeeping Requirements for the Furnaces in the Melt Shop

i. The Permittee shall keep the following operating records for the EAFs:

A. Steel (metal) production (tons/day, tons/month, and tons/year).

B. Fuel consumption of the EAFs, as determined directly from fuel meters on the furnaces or indirectly from operating hours of the burners and their rated capacity.

ii The Permittee shall keep an operating log or other operational records for the melt shop that at a minimum includes information on the status and operating schedule of each furnace and its associated control system.

iii. The Permittee shall keep maintenance and repair logs or other records for each furnace and its associated control system.

iv. Copy of all inspections performed;

v. Copy of the written operating procedures;

vi. Copy of the good air pollution control practices;

vii. The Permittee shall maintain detailed records of periods when operation of a furnace continued during malfunctions and breakdowns, including continued operation of an EAF with excess emissions as addressed by Condition 7.1.3 (d) (i). At a minimum, these records shall include:

A. A full and detailed explanation of why malfunction or breakdown occurred;

B. The date and length of time during which operation continued under such conditions;

C. The effect of the malfunction/breakdown on emissions and whether Condition 7.1.3(b)(i) and (iii) may have been exceeded;

D. The measures used to reduce the quantity of emissions and length of time during which such operations occurred; and

E. The steps the Permittee will take to prevent similar malfunctions or breakdowns.

viii. The Permittee shall maintain records of the following items related to emissions of the furnaces:

A. The standard emission factors (lb/ton) used by the Permittee for estimating controlled emissions from the furnaces, which information shall be based on site-specific test data, representative test data, or emission factors or other methodology for estimating emissions published by USEPA, with supporting explanation and calculations.

B. Records of the emissions of the EAFs, lb/hr, tons/month and tons/year, with supporting calculations.

ix. The Permittee shall keep records for all opacity measurements for the Electric Melt Shop made in accordance with USEPA Method 9 for the affected operations that the Permittee conducts or that are conducted at its behest by individuals who are qualified to make such observations. For each occasion on which such measurements are made, these records shall include:

A. the formal report for the measurements if conducted pursuant to Condition 7.1.7(a)(i)(C); or otherwise

B. the identity of the observer;

C. a description of the measurements that were made;

D. the operating condition of the affected operations;

E. the observed opacity; and

F. copies of the raw data sheets for the measurements.

x. Pursuant to 40 CFR 63.10685(c) and in addition to the records required by 40 CFR 63.10, the Permittee shall keep records to demonstrate compliance with the requirements for a pollution prevention plan in 40 CFR 63.10685(a)(1) and/or for the use of only restricted scrap in 40 CFR 63.10685(a)(2) and for mercury in 40 CFR 63.10685(b)(1) through (3) as applicable. The Permittee shall keep records documenting compliance with 40 CFR 63.10685(b)(4) for scrap that does not contain motor vehicle scrap.

b. Recordkeeping for Other Emission Units

i. The Permittee shall maintain the following records related to emissions of: (1) The continuous caster. As records of certain information are to be kept in a file, the Permittee shall review and update such information on an annual basis so that the file contains accurate information addressing the current circumstances of the source.

A. A file that contains the standard emission factors (lb/ton) used by the Permittee for estimating emissions from such units, which information shall be based on site-specific tests, manufacturer’s data or methodology for estimating emissions published by USEPA, with supporting explanation and calculations.

B. Records on a monthly basis for the amount of materials handled (tons/month) and steel throughput (tons/month) by these units as related to the applicable emission factors.

C. Detailed records for each period of malfunction or breakdown that was accompanied by excess emissions, including:

1. A description of the event;

2. An estimate of control measures that were present during the event; and

3. An estimate of the additional emissions that occurred during the event.

D. Records for emissions, ton/month and tons/year, based on the emission factors and other information contained in other required records, with supporting calculations.

c. Records for Compliance Assurance Monitoring (CAM) Requirements

The Permittee shall maintain records of the monitoring data, monitor performance data, corrective actions taken, monitoring equipment maintenance, and other supporting information related to the monitoring requirements in Condition 7.1.8, as required by 40 CFR 64.9(b)(1).

7.1.10 Reporting Requirements

a. Reporting of Deviations

i. The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected Electric Melt Shop with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

A. Malfunctions or breakdowns resulting in excess emissions shall be reported in accordance with Condition 7.1.10.

B. Deviations from Condition 7.1.3, 7.1.5(a) and (c), or 7.1.6 shall be reported within 30 days.

C. Deviations from Condition 7.1.5(b) resulting in deviations from Conditions 7.1.3 or 7.1.6 shall be reported within 30 days.

D. Other deviations shall be reported with the semi-annual or quarterly report.

b. Reporting Requirements – Periodic Reporting

i. The Permittee shall submit a semi-annual compliance report to the Illinois EPA that includes:

A. Steel production (tons).

B. Detailed information on deviations that were not previously reported and a summary of deviations that were previously reported.

ii. If there is a deviation during the first or third calendar quarter, a quarterly report shall be submitted.

c. Reporting of Compliance Assurance Monitoring (CAM)

The Permittee shall submit monitoring reports to the Illinois EPA in accordance with Condition 8.6.1 and shall include, at a minimum, the information required under Condition 8.6.1 and the following information [40 CFR 64.6(c)(3), 64.9(a)(1), and (2)]:

i. Summary information on the number, duration, and cause of excursions or exceedances, and the corrective actions taken [40 CFR 64.6(c)(3) and 64.9(a)(2)(i)]; and

ii. Summary information on the number, duration, and cause for monitoring equipment downtime incidents, other than downtime associated with calibration checks [40 CFR 64.6(c)(3) and 64.9(a)(2)(ii)].

d. Reporting requirements established in 40 CFR 63.10685(c)(3):

After the compliance date (June 30, 2008) as established in 40 CFR 63.10681(a), the Permittee shall start implementation of the following requirements:

The Permittee shall submit semiannual compliance reports to the Illinois EPA for the control of contaminants from scrap according to the requirements in 40 CFR 63.10(e). The report must clearly identify any deviation from the requirements in 40 CFR 63.10685(a) and (b) and the corrective action taken. The Permittee shall identify which compliance option in 40 CFR 63.10685(b) applies to each scrap provider, contract, or shipment.

e. Reporting Requirements - Notifications

i. The Permittee shall notify the Illinois EPA’s regional office by telephone as soon as possible upon the occurrence of excess emissions due to a malfunction or breakdown.

ii. The Permittee shall submit a follow-up report to the Illinois EPA’s regional office in Collinsville, providing an explanation of the occurrence as addressed by the records required by Condition 7.1.9(a)(vii), within 10 days.

f. At least 10 days before beginning activities that are specifically intended to return EAF No. 8 to active service, the Permittee shall notify the Illinois EPA. This notification shall include a detailed listing of the

actions that will be taken to return the furnace to service, with a description of the activities and their estimated cost, and demonstrate that these activities will not result in a modification of the furnace for purposes of the NSPS, MSSCAM or PSD.

g. Submit notification to the Illinois EPA no later than 180 days prior to December 28, 2010 to demonstrate to the satisfaction of the permitting authority that additional time is needed to install or modify emission control equipment for the opacity limit in 63.10686(b)(2) or (c)(2) [40 CFR 63 Subpart A – General Provisions].

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected Electric Melt Shop.

7.1.12 Compliance Procedures

a. Compliance with Condition 7.1.3(b)(i), (ii) and (iii) is demonstrated by the testing requirement of Condition 7.1.7, monitoring requirements of 7.1.8 and recordkeeping requirements of 7.1.9.

b. Compliance with Condition 7.1.3(c) is demonstrated by the testing requirement of Condition 7.1.7 and recordkeeping requirements of 7.1.9.

c. Compliance with Condition 7.1.6(a), (b) and (c) is demonstrated by the recordkeeping requirements of 7.1.9.

d. Compliance with the emission limits in Conditions 5.6 and 7.1.6 shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission factors and formulas listed below:

i. Emission factors for EAF7 and EAF8 of the affected EMS:

Pollutant	Emission Factors (lb/ton)
VOM	0.15
PM	0.19
PM_{10}	0.19
Pb	0.0024
SO_2	0.63
NO_x	0.70
CO	2.00

The emission factor for VOM is based on typical emissions currently achieved by electric arc furnaces

Emission formula for EAF7 and EAF8 of the affected Electric Melt Shop:

(Emissions, lb) = (The Appropriate Emission Factor, lb/ton) x (Steel Production, tons)

ii. Emission factors for natural gas combustion by ladle preheaters, tundish preheater, tundish dryer and continuous caster of affected Electric Melt Shop:

Pollutant	Emission Factors (lb/mmscf)
VOM	5.5
PM	7.6
SO_2	0.6
NO_x	100
CO	84

The emission factors (lb/mmscf) are for Natural Gas-Fired Small Boilers (<100 mmBtu/hr Heat Input) from AP-42 Section 1.4 (dated 7/98).

Emission formula for the ladle preheaters, tundish preheater, tundish dryer and continuous caster of affected Electric Melt Shop:

(Emissions, lb) = (The Appropriate Emission Factor, lb/mmscf) x (tons of steel cast) x (140 cu. ft. of natural gas per ton cast) x (10^{-6} mmcf/cf).

iii. Emission factors for tundish shakeout of the affected Electric Melt Shop:

Pollutant	Emission Factors (lb/ton)
PM	0.15
PM_{10}	0.015

The emission factor for tundish shakeout is from screening of crushed stone, Table 11.19.2-2, AP-42 (dated 1/95).

Emission formula for the tundish shakeout of the affected Electric Melt Shop:

(Emissions, lb) = (The Appropriate Emission Factor, lb/ton) x (Material in Shakeout, tons) x (1 - Baghouse Control Efficiency)

7.2 Ladle Metallurgy

7.2.1 Description

The Ladle Metallurgy process includes the ladle furnace, lime silo and lime surge bin. The ladle metallurgy furnace, lime silo and lime surge bin are all controlled by their own baghouse. Molten steel is brought from the Electric Melt Shop for further refining. Refining takes place in the ladle furnace in batches where lime is added from the lime surge bin which is fed by the lime silo.

Note: This narrative description is for informational purposes only and is not enforceable.

7.2.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
7.2	Ladle Metallurgy Furnace; Lime Silo; Lime Surge Bin;	1994	Baghouse and/or bin vents

7.2.3 Applicable Provisions and Regulations

a. The “affected Ladle Metallurgy units” for the purpose of these unit-specific conditions, are units described in Condition 7.2.2.

b. The affected Ladle Metallurgy units are subject to 35 IAC 212.123 for opacity which provides that:

   i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122 [35 IAC 212.123(a)].

   ii. The emissions of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 1000 foot radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period [35 IAC 212.123(b)].

c. The ladle metallurgy furnace, lime silo and lime surge bin are subject to the particulate matter limitations in which

emissions enter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (is referenced in Attachment 2) [35 IAC 212.321].

d. The ladle metallurgy furnace, is subject to 35 IAC 214.301 which states:

Except as further provided by this Part, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

e. Malfunction and Breakdown Provisions

Subject to the following terms and conditions, the Permittee is authorized to continue operation of the affected Ladle Metallurgy units in violation of the applicable standards in Condition 7.2.3 in the event of a malfunction or breakdown of the Ladle Metallurgy units. This authorization is provided pursuant to 35 IAC 201.149, 201.161 and 201.262, as the Permittee has applied for such authorization in its application, generally explaining why such continued operation would be required to provide essential service or to prevent risk of injury to personnel or severe damage to equipment, and describing the measures that will be taken to minimize emissions from any malfunctions and breakdowns. This authorization supersedes the general prohibition in Condition 9.2.3 against continued operation in such circumstances.

i. This authorization only allows such continued operation as necessary to provide essential service or prevent risk of injury to personnel or severe damage to equipment and does not extend to continued operation solely for the economic benefit of the Permittee.

ii. Upon occurrence of excess emissions due to malfunction or breakdown, the Permittee shall as soon as practical minimize material throughput of the Ladle Metallurgy units, repair the baghouse, remove the affected Ladle Metallurgy units from service or undertake other action so that excess emissions cease.

iii. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Conditions 7.2.9 and 7.2.10. For these purposes, time shall be measured from the start of a particular incident. The absence of excess emissions for a

short period shall not be considered to end the incident if excess emissions resume. In such circumstances, the incident shall be considered to continue until corrective actions are taken so that excess emissions cease or the Permittee takes the affected Ladle Metallurgy units out of service.

iv. Following notification to the Illinois EPA of a malfunction or breakdown with excess emissions, the Permittee shall comply with all reasonable directives of the Illinois EPA with respect to such incident, pursuant to 35 IAC 201.263.

v. This authorization does not relieve the Permittee from the continuing obligation to minimize excess emissions during malfunction or breakdown. As provided by 35 IAC 201.265, an authorization in a permit for continued operation with excess emissions during malfunction and breakdown does not shield the Permittee from enforcement for any such violation and only constitutes a prima facie defense to such an enforcement action provided that the Permittee has fully complied with all terms and conditions connected with such authorization.

7.2.4 Non-Applicability of Regulations of Concern

Non-applicability of regulations of concern are not set for the affected Ladle Metallurgy units.

7.2.5 Control Requirements and Work Practices

The terms and conditions identified below shall be followed to assure compliance, pursuant to Section 39.5(7)(a) of the Act.

a. i. The Permittee shall operate and maintain the Ladle Metallurgy process and associated control systems in accordance with good air pollution control practice to minimize emissions.

ii. For this purpose, the Permittee shall operate the affected Ladle Metallurgy units and associated control systems in accordance with written operating procedures developed and maintained by the Permittee.

b. i. For the affected Ladle Metallurgy furnace, the Permittee shall perform operational inspections on at least a monthly basis of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any

deficiencies shall be noted and proper maintenance performed.

ii. This inspection need not be performed for the affected Ladle Metallurgy furnace if it is not operated at all during the month.

7.2.6 Production and Emission Limitations

In addition to Condition 5.3.2 and the source-wide emission limitations in Condition 5.6, the affected Ladle Metallurgy process is subject to the following:

a. i. Emissions from the affected ladle metallurgy furnace shall not exceed the following limits:

Pollutant	Lbs/Ton	Lbs/Hour	Tons/Year
PM	0.012	1.28	4.51
PM_{10}	0.012	1.28	4.51
CO	0.20	22.40	75.00
NO_x	0.02	2.24	7.50
VOM	0.0086	0.96	3.22
SO_2	0.10	11.20	37.50

ii. This Permit is issued based on negligible emissions of lead from the ladle metallurgy furnace. For this purpose, emissions of lead shall not exceed nominal emission rate of 0.010 lb/hour and 0.044 tons/year [T1].

iii. Compliance with the hourly limit shall be determined as a daily average [T1].

iv. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

NOTE: The above limitations were established in Permit 00010015, pursuant to PSD. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for PSD [T1].

b. i. Emissions from the affected lime silo shall not exceed the following limits:

Pollutant	(Lb/Month)	(Ton/Year)
PM	333	1.50

ii. These limits are based on the controlled emission rate of 0.342 pound per hour and 8736 hours per year operation [T1].

iii. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

iv. The above limitations were established in Permit 93100108, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.2.7 a. Testing Requirements

i. A. By March 31, 2009, upon renewal of this permit, and at such other times as may be requested by the Illinois EPA, the Permittee shall have tests conducted for the Ladle Metallurgy Furnace to measure emissions of PM/PM_{10}, SO_2, NO_x, and CO from this furnace.

B. During these measurements of PM/PM_{10} emissions, observations of opacity shall also be conducted in accordance with Condition 7.2.7(b).

ii. A. These tests shall be conducted at the Permittee's expense by an approved testing service during operating conditions that are representative of maximum emissions and the sampling time of each test run shall cover an integral number of heats or cycles of the furnace.

B. The following methods and procedures shall be used for testing emissions, provided however that other appropriate test method developed by USEPA may be used for testing emissions of condensable PM or VOM if approved by the Illinois as part of the approval of the test plan. Refer to 40 CFR 60, Appendix A and 40 CFR 51, Appendix M for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Sulfur Dioxide	USEPA Method 6
Nitrogen Oxides	USEPA Method 7 or 7E
Carbon Monoxide	USEPA Method 10
PM/PM_{10}	USEPA Methods 5 or 5D* and 202

Volatile Organic Material	USEPA Method 18, 25 or 25A, as appropriate

* For the LMF, USEPA Method 5, as appropriate for testing of negative-pressure baghouses, shall be used to determine the particulate matter concentration.

iii. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review and approval. This plan shall describe the specific procedures for testing including at a minimum:

A. The person(s) who will be performing sampling and analysis and their experience with similar tests.

B. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum emissions, the levels of operating parameters at or within which compliance is intended to be shown, if parameters for the process and any control equipment will be determined.

C. The specific determination of emissions and operations which are intended to be made, including sampling and monitoring locations.

D. The test methods which will be used, with the specific analysis method.

E. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

F. A statement that the testing will be performed by a qualified independent testing service.

iv. A. Prior to carrying out these tests, the Illinois EPA shall be notified a minimum of 30 days prior to the scheduled date of these tests with the exact date, time and place of these tests, to enable the Illinois EPA to witness these tests.

B. If the scheduled date for the test is changed, the Permittee shall inform the Illinois EPA within five (5) working days of the scheduled test date and must specify the date and time of the rescheduled test.

v. A copy of the Final Reports for these tests and compliance status shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized.

b. Opacity Testing Requirements

i. The Permittee shall have the opacity from the openings of the building and the capture systems for the Metallurgy Furnace determined by a qualified observer in accordance with USEPA Method 9 while an affected furnace is operating, as further specified below.

ii. The duration of opacity observations for each test shall be taken during the entire stack test runs and the entire refining process of the furnace being tested.

iii. A. Upon written request by the Illinois EPA, additional opacity observations shall be conducted within 5 operating days at the Ladle Metallurgy Furnace from the date of the request by the Illinois EPA or on the date agreed upon by the Illinois EPA, whichever is later. For such observations conducted pursuant to a request from the Illinois EPA:

1. The Permittee shall notify the Illinois EPA at least 24 hours in advance of the date and time of these observations, in order to enable the Illinois EPA to witness the observations. This notification shall include the name and employer of the qualified observer(s).

2. The Permittee shall promptly notify the Illinois EPA of any changes in the time or date for observations.

3. The duration of these observations shall cover a complete heat or cycle of an affected furnace.

4. The Permittee shall provide a copy of the current certification for the opacity observer and observer’s readings to the Illinois EPA at the time of the observations, if the Illinois EPA personnel are present.

7.2.8 Monitoring Requirements

a. INSTRUMENTATION:

i. The Permittee shall install, operate and maintain instrumentation for the following parameters of the capture system and baghouse(s) for the affected Ladle Metallurgy furnace.

A. Fan motor amperes; and

B. Furnace static pressure or ductwork static pressure prior to the baghouse(s).

b. OPACITY:

i. Observations of opacity shall be conducted on the following frequency unless absence of adequate daylight or weather conditions preclude scheduled observation, in which case, the next observations shall be conducted on the next operating day of the melt shop during which observations of opacity can reasonably be conducted in accordance with USEPA Method 9:

A. On a weekly basis (at least once every 7 operating days of the Ladle Metallurgy process) except as provided below.

B. On a daily basis (at least 5 days out of 7 operating days of the Ladle Metallurgy process) if any of the five previous observations measured opacity of 25 percent or more, continuing on a daily basis until the maximum opacities measured in five consecutive daily observations are all less than 25 percent, at which time observations on a weekly basis shall resume.

C. The duration of opacity observations for each test shall be at least 30 minutes (five 6-minute averages) unless no visible emissions are observed as determined by USEPA Method 22 or the average opacities for the first 12 minutes of observations (two six-minute averages) conducted for the point of release that displays the greatest opacity are both less than 10%.

ii. A. Upon written request by the Illinois EPA, additional opacity observations shall be conducted within 5 operating days by the Ladle Metallurgy from the date of the request by the Illinois EPA or on the date agreed upon by the Illinois EPA, whichever is later. For such

observations conducted pursuant to a request from the Illinois EPA:

1. The Permittee shall notify the Illinois EPA at least 24 hours in advance of the date and time of these observations, in order to enable the Illinois EPA to witness the observations. This notification shall include the name and employer of the qualified observer(s).

2. The Permittee shall promptly notify the Illinois EPA of any changes in the time or date for observations.

3. The duration of these observations shall cover a complete heat or cycle of an affected furnace.

4. The Permittee shall provide a copy of the current certification for the opacity observer and observer's readings to the Illinois EPA at the time of the observations, if the Illinois EPA personnel are present.

c. INSPECTION:

i. If condition 7.2.8(b)(i)(B) is triggered, an immediate inspection shall be performed as specified in condition 7.2.5(b) and appropriate action taken to address the opacity, if required.

7.2.9 Recordkeeping Requirements

a. In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected Ladle Metallurgy process to demonstrate compliance with Conditions 5.6.1, 7.2.3, 7.2.5 and 7.2.6, pursuant to Section 39.5(7)(b) of the Act:

i. Records of steel batches, including steel production, in tons per month and tons per year.

ii. Records of lime throughput in tons per month and tons per year.

b. The Permittee shall maintain the following records related to emissions for the affected Ladle Metallurgy units. As records of certain information are to be kept in a file, the Permittee shall review and update such information on a periodic basis so that the file contains accurate information addressing the current circumstances of the source.

i. The standard emission factors (lb/ton) used by the Permittee for estimating controlled emissions from the affected Ladle Metallurgy units, which information shall be based on site-specific test data, representative test data, or emission factors or other methodology for estimating emissions published by USEPA, with supporting explanation and calculations.

ii. Records on a monthly basis for the amount of materials handled and steel produced (tons/month) by these units as related to the applicable emission factors.

iii. Detailed records for each period of malfunction or breakdown that was accompanied by excess emissions, including a description of the event, an estimate of control measures that were present during the event and an estimate of the additional emissions that occurred during the event.

iv. Records for emissions, lb/hr, ton/month and tons/year, based on the emission factors and other information contained in other required records, with supporting calculations.

v. Good air pollution control practices.

vi. Written operating procedures.

vii. Inspections.

viii. The Permittee shall keep records for all opacity measurements for the Ladle Metallurgy furnace made in accordance with USEPA Method 9 for the affected operations that the Permittee conducts or that are conducted at its behest by individuals who are qualified to make such observations. For each occasion on which such measurements are made, these records shall include:

A. The formal report for the measurements if conducted pursuant to Condition 7.2.7(b); or otherwise

B. The identity of the observer;

C. A description of the measurements that were made;

D. The operating condition of the affected operations;

E. The observed opacity; and

F. Copies of the raw data sheets for the measurements.

7.2.10 Reporting Requirements

a. Reporting of Deviations

i. The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected Ladle Metallurgy units with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

A. Deviations from Condition 7.2.3, 7.2.5(b) or 7.2.6 shall be reported within 30 days.

B. Deviations from Condition 7.2.5(a) resulting in deviations from Conditions 7.2.3 or 7.2.6 shall be reported within 30 days.

C. Other deviations shall be reported with the semi-annual or quarterly report.

b. Reporting Requirements – Periodic Reporting

i. The Permittee shall submit a semi-annual compliance report to the Illinois EPA that includes:

A. Records of steel batches, including steel production, in tons per month and tons per year.

B. Records of lime throughput in tons per month and tons per year.

C. Records of deviations from the monitored operating parameters of Condition 7.2.8.

D. Records of emissions in tons per month and tons per year.

E. Detailed information on deviations that were not previously reported and a summary of deviations that were previously reported.

ii. If there is a deviation during the first or third calendar quarter, a quarterly report shall be submitted.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected Ladle Metallurgy units.

7.2.12 Compliance Procedures

a. Compliance with Condition 7.2.3(b) and 7.2.3(c) is demonstrated by the testing requirement of Condition 7.2.7, monitoring requirements of 7.2.8 and recordkeeping requirements of 7.2.9.

b. Compliance with Condition 7.2.3(d) is demonstrated by the testing requirement of Condition 7.2.7 and recordkeeping requirements of 7.2.9.

c. Compliance with Condition 7.2.5 is demonstrated by the recordkeeping requirements of 7.2.9.

d. Compliance with the emission limits in Conditions 5.6 and 7.2.6 shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below:

i. Emission factors for the ladle metallurgy furnace of the affected Ladle Metallurgy units:

Pollutant	Lbs/Ton
PM	0.012
PM_{10}	0.012
CO	0.20
NO_x	0.02
VOM	0.0086
SO_2	0.10

Emission formula for the ladle metallurgy furnace of the affected Ladle Metallurgy units:

(Emissions, lb) = (The Appropriate Emission Factor, lb/ton) x (Steel Throughput, ton)

ii. Emission factors for the Lime Silo of the affected Ladle Metallurgy units:

Pollutant	Emission Factors (lb/hr)
PM	0.072
PM_{10}	0.072

The emission factors are based on manufacturer's guarantee of 0.02 gr/scf, maximum blower capacity for lime transfer of 420 acf/min.

Emission formula of the Lime Silo of the affected Ladle Metallurgy units:

(Emissions, lb) = (The Appropriate Emission Factor, lb/hr) x (Lime Transferred, hours)

iii. Emission factors for the Lime surge bin of the affected Ladle Metallurgy units:

Pollutant	Emission Factors (lb/hr)
PM	0.27
PM_{10}	0.27

The emission factors are based on manufacturer's guarantee of 0.02 gr/scf, maximum blower capacity for lime transfer of 1575 acf/min.

Emission formula of the Lime surge bin of the affected Ladle Metallurgy:

(Emissions, lb) = (The Appropriate Emission Factor, lb/hr) x (Lime Transferred, hours)

7.3 14″ Finishing Mill

7.3.1 Description

The 14″ Rolling Mill receives steel blooms from the Melt Shop, heats these blooms in a reheat furnace by combusting natural gas, hot rolls these blooms into steel billets, and shears the billets to the appropriate length. The ends of certain larger sizes of steel billets are heated by natural gas torches during the cooling process to prevent cracking. Natural gas torches are also used to cut cobbles and to cut off starter bars and piped ends. The emissions from this unit consist of the products of combustion from the reheat furnace which are vented to a stack, the fugitive volatile organic material from the rolling oils vaporized during hot rolling, and the products of combustion from the natural gas torches.

The 14″ Mill also contains a Trial Bar Operation consisting of a small natural gas fired furnace and a rolling operation which processes trial size steel bars prior to switching to the main line. The 14″ Mill Trial Bar Operation vents emissions from the products of combustion and volatile organic material from the rolling mills within the building.

Note: This narrative description is for informational purposes only and is not enforceable.

7.3.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
7.3	14 inch Rolling Mill Reheat Furnace and Trial Bar Furnace; 14 inch Rolling Mill;	Jan/1968	None

7.3.3 Applicable Provisions and Regulations

a. The “affected finishing mill” for the purpose of these unit-specific conditions, are units described in Condition 7.3.2.

b. The finishing mill is subject to 35 IAC 212.123 for opacity, which provides that:

   i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122 [35 IAC 212.123(a)].

   ii. The emissions of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60

percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 1000 foot radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period [35 IAC 212.123(b)].

c. The affected finishing mill is subject to 35 IAC 219.301 which states:

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in Sections 219.302, 219.303, 219.304 of this Part and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 219.301].

7.3.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the reheat furnace of the affected finishing mill not being subject to 35 IAC 216.121, because the reheat furnace of the affected finishing mill are not defined as fuel combustion emission sources pursuant to 35 IAC 211.2470.

b. This permit is issued based on the reheat furnace of the affected finishing mill not being subject to 35 IAC 217, Subpart B and Subpart C, because the reheat furnace of the affected finishing mill is not defined as fuel combustion emission sources pursuant to 35 IAC 211.2470.

c. This permit is issued based on the reheat furnace and 14” rolling mill of the affected finishing mill not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected reheat furnace and 14” rolling mill does not use an add-on control device to achieve compliance with an emission limitation or standard.

7.3.5 <u>Control Requirements and Work Practices</u>

The terms and conditions identified below shall be followed to assure compliance, pursuant to Section 39.5(7)(a) of the Act.

a. Natural gas shall be the only fuel used in the rolling mill (reheat furnaces).

7.3.6 Production and Emission Limitations

a. i. Emissions from the finishing mill (reheat furnace) shall not exceed the following limits. These limits are based on usage of up to 1,130 million cubic feet of natural gas annually (equivalent to rolling 460,000 tons of steel at a natural gas usage rate of 2,450 cubic feet per ton rolled).

b. i. Emissions from the finishing mill (reheat furnace) shall not exceed the following limits:

Pollutant	Lbs/Ton	Lbs/Hour	Tons/Year
PM/PM_{10}	0.019	2.17	7.59
CO	0.213	24.00	83.85
NO_x	0.711	79.90	279.50
VOM	0.014	1.57	5.49

ii. This Permit is issued based on negligible emissions of SO_2 from the finishing mill. For this purpose, emissions of SO_2 shall not exceed nominal emission rates of 0.2 lb/hour and 0.66 tons/year [T1].

iii. This Permit is issued based on negligible emissions of lead from the finishing mill. For this purpose, emissions of lead shall not exceed nominal emission rates of 0.005 lb/hour and 0.022 tons/year [T1].

iv. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

NOTE: The above limitations were established in Permit 00010015, pursuant to PSD. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for PSD [T1].

7.3.7 Testing Requirements

Testing requirements are not set for the affected reheat furnace and 14″ rolling mill of the affected finishing mill. However, there are provisions for source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.3.8 Monitoring Requirements

Monitoring requirements are not set for the affected reheat furnace and 14″ rolling mill of the affected finishing mill.

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected reheat furnace and 14″ rolling mill of the affected finishing mill to demonstrate compliance with Conditions 5.6.1 and 7.3.3, pursuant to Section 39.5(7)(b) of the Act:

a. Records of steel throughput in tons per month and tons per year.

b. Records of natural gas combusted in standard cubic feet per month and standard cubic feet per year.

c. Records of emissions in tons per month and tons per year.

7.3.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected reheat furnace and 14″ rolling mill of the affected finishing mill with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

Emissions from or operation of the reheat furnace and 14″ rolling mill of the affected finishing mill in excess of the limits specified in Condition 7.3.3 within 30 days of such occurrence.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected reheat furnace and 14″ rolling mill of the affected finishing mill.

7.3.12 Compliance Procedures

a. Compliance with Condition 7.3.3(b)) is considered to be assured by the inherent nature of the operations of the reheat furnace and 14″ rolling mill of the affected finishing mill, as demonstrated by historical operation.

b. Compliance with Condition 7.3.3(c) shall be demonstrated by the records required in Condition 7.3.9.

c. Compliance with the emission limits in Condition 5.6 shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formulas listed below:

i. Emission factors for the reheat and Trial Bar furnace of the affected finishing mill:

Pollutant	Emission Factors (lb/mmscf)
VOM	5.5
PM	7.6
SO_2	0.6
NO_x	280
CO	84

The emission factors (lb/mmscf) are for Natural Gas-Fired Large Boilers (>100 mmBtu/hr Heat Input) from AP-42 Section 1.4 (dated 7/98).

Emission formula for the reheat furnace of the affected finishing mill:

(Emissions, lb) = (The Appropriate Emission Factor, lb/mmscf) x (Natural Gas Combusted, mmscf)

ii. Emission factors for the 14” rolling mill of the affected finishing mill:

Pollutant	Emission Factors (lb/ton)
VOM	0.019

The emission factor (lb/ton) is for tons of steel rolled from “Volatilized Lubricant Emissions from Steel Rolling Operations” as presented by Mackus and Joshi at the Symposium on Iron and Steel Pollution Abatement Technology (Chicago, IL 1979)

(Emissions, lb) = (The Appropriate Emission Factor, lb/mmscf) x (Tons of steel rolled)

7.4 Gasoline Storage Tank

7.4.1 Description

Gasoline Storage includes a 550 gallon aboveground storage tank. The aboveground storage tank is equipped with submerge fill.

Note: This narrative description is for informational purposes only and is not enforceable.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
AST	550 Gallon Aboveground Gasoline Storage Tank	Feb/2009	Submerge Fill

7.4.3 Applicable Provisions and Regulations

a. The Gasoline Tank is an “affected tank” for the purpose of these unit-specific conditions, described in Condition 7.4.2.

b. The affected tank is subject to the following limits:

i. No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, or unless such tank is a pressure tank as described in 35 IAC 219.121(a) or is fitted with a recovery system as described in 35 IAC 219.121(b)(2) [35 IAC 219.122(b)].

ii. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 219.302, 219.303, or 219.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 219 Subpart G shall only apply to photochemically reactive material [35 IAC 219.301].

iii. Pursuant to 35 IAC 219.583(a), no person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank at a gasoline dispensing operation unless:

A. The tank is equipped with a submerged loading pipe [35 IAC 219.583(a)(1)].

c. The affected tank is subject to 35 IAC 219.585, which provides that:

i. No person shall sell, offer for sale, dispense, supply, offer for supply, or transport for use in Illinois gasoline whose Reid vapor pressure exceeds the applicable limitations set forth in Conditions 7.4.3(c)(ii) and (c)(iii) (see also 35 IAC 219.585(b) and (c)) during the regulatory control periods, which shall be June 1 to September 15 [35 IAC 219.585(a)].

ii. The Reid vapor pressure of gasoline, a measure of its volatility, shall not exceed 7.2 psi (49.68 kPa) during the regulatory control period in 1995 and each year thereafter [35 IAC 219.585(b)].

iii. The Reid vapor pressure of ethanol blend gasolines shall not exceed the limitations for gasoline set forth in Condition 7.4.3(c)(ii) (see also 35 IAC 219.585(b)) by more than 1.0 psi (6.9 kPa). Notwithstanding this limitation, blenders of ethanol blend gasolines whose Reid vapor pressure is less than 1.0 psi above the base stock gasoline immediately after blending with ethanol are prohibited from adding butane or any product that will increase the Reid vapor pressure of the blended gasoline [35 IAC 219.585(c)].

d. The affected facility is an affected source under the federal National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Category: Gasoline Dispensing Facilities, 40 CFR 63, Subpart CCCCCC. As an affected source, the Permittee must comply with applicable requirements of the NESHAP, 40 CFR 63 Subpart CCCCCC, and related requirements of 40 CFR 63, Subpart A, General Provisions. The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement (See Sections 7.4.5 and 7.4.6).

Note: This permit is issued based on the affected facility being subject to 40 CFR 63, Subpart CCCCCC, because it is located at a source that is not a major source for emissions of hazardous air pollutants.

7.4.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected tank not being subject to the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels), 40 CFR Part 60, Subpart Kb, because the affected AST is less than 40 cubic meters (10,566 gallons).

b. This permit is issued based on the affected tank not being subject to 35 IAC 219.121, because the affected tank is less than 40,000 gallons.

c. This permit is issued based on the affected tank not being subject to 35 IAC 219.122(a), because the affected tank is less than 40,000 gallons.

d. This permit is issued based on the affected tank not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected tank does not have potential pre-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

7.4.5 Control Requirements and Work Practices

The affected tank is subject to the following control requirements and work practices:

a. The affected tank shall only be used for the storage of gasoline.

b. You must allow gasoline to be handled in a manner that would not result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following [40 CFR 63.11116]:

   i. Minimize gasoline spills:

   ii. Clean up spills as expeditiously as practicable;

   iii. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

   iv. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

c. You are not required to submit notifications or reports, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

7.4.6 Production and Emission Limitations

a. i. The capacity of the affected tank shall not exceed 550 gallons [T1N].

   ii. The monthly throughput of the affected tank shall not exceed 10,000 gallons of gasoline per year [T1N].

   iii. The Permittee shall, upon request by the Illinois EPA, demonstrate that the average monthly gasoline

throughput of the affected facility is less than the 10,000-gallon, pursuant to 40 CFR 63.11111(e).

b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

7.4.7 Testing Requirements

a. Upon reasonable request by the Illinois EPA, pursuant to Section 39.5(7)(b) of the Act, the Reid vapor pressure of gasoline and the ethanol content of ethanol blend gasolines shall be determined according to the methods specified below:

i. Pursuant to 35 IAC 219.585(d), all sampling of gasoline required pursuant to the provisions of Conditions 7.4.7(c)(ii) and (c)(iii) (see also 35 IAC 219.585(e) and (f)) shall be conducted by the following approved methods or procedures:

A. Sampling procedures for Fuel Volatility, 40 CFR 80, Appendix D [35 IAC 219.585(d)(3)].

ii. The Reid vapor pressure of gasoline shall be measured in accordance with either test method ASTM D323 or a modification of ASTM D323 known as the “dry method” as set forth in 40 CFR 80, Appendix E. For gasoline - oxygenate blends which contain water-extractable oxygenates, the Reid vapor pressure shall be measured using the dry method test [35 IAC 219.585(e)].

iii. The ethanol content of ethanol blend gasolines shall be determined by use of one of the approved testing methodologies specified in 40 CFR 80, Appendix F [35 IAC 218.585(f)].

7.4.8 Monitoring Requirements

On a annual basis, in the period between March 1 and April 30 of each year, the Permittee shall conduct an inspection of the affected storage tank to review its physical condition and ability to comply with the applicable equipment requirements of condition 7.4.3(b)(iii), pursuant to sections 39.5(7)(a) and (d) of the Act.

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected tank to demonstrate compliance with Conditions 5.6.1, 7.4.3 and 7.4.5, pursuant to Section 39.5(7)(b) of the Act:

a. Design information for the tank showing the presence of a permanent submerged loading pipe;

b. Maintenance and repair records for the tank, as related to the repair or replacement of the loading pipe;

c. The throughput of the affected tank, gal/mo and gal/yr; and

d. The VOM emissions from the affected tank based on the material stored, the tank throughput, and the applicable emission factors and formulas with supporting calculations using the methods in Condition 7.4.12.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected tank with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

a. Any storage of VOL in an affected tank that is not in compliance with the requirements of Conditions 7.4.3(b) (see also 35 IAC 219.122(b) and 219.583(a)(1)), e.g., no "permanent submerged loading pipe," within five days of becoming aware of the non-compliance status. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps taken to avoid future non-compliance;

b. Your are not required to submit notifications or reports for 7.4.3, 7.4.5 or 7.4.6 per NESHAP CCCCCC, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput [40 CFR 63.11113].

c. The storage of any VOL or VPL other than the material specified in Condition 7.4.5(a) within 30 days of becoming aware of the non-compliance status. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps to be taken to avoid future non-compliance.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected tank.

7.4.12 Compliance Procedures

a. Compliance with Conditions 7.4.3(b) and (c) is considered to be assured by the use of submerged loading pipe as required in Condition 7.4.3, 7.4.7 for testing, 7.4.8 for monitoring and by the recordkeeping requirement of Condition 7.4.9.

b. For the purpose of estimating VOM emissions from the affected tank to determine compliance with Conditions 5.6.1 and 7.4.3, Versions 3.1 or 4.0 of the TANKS program are acceptable.

7.5 Fugitive Emissions

7.5.1 Description

Vehicle traffic, wind erosion and slag processing generate fugitive emissions of particulate matter. These points of fugitive emissions include material handling (e.g., slag, baghouse dust, lime, storage piles), unpaved roadways, paved roadways and parking lots.

Note: This narrative description is for informational purposes only and is not enforceable.

7.5.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
7.5 Vehicle Traffic	Paved/Unpaved Roads/Parking Lots (PM, PM_{10})	N/A	Water or Chemical Dust Suppressant as Needed for Unpaved Roads
7.5 Material Handling	EAF/LMF Baghouse Dust; K061 Silo; Dust Loading Building (PM, PM_{10})	N/A	Baghouse
	Slag Handling (PM, PM_{10})	N/A	None
	Lime Handling (PM, PM_{10})	N/A	Bin Vents Filters
	Scrap/Alloy Handling (PM, PM_{10})	N/A	None
	EAF Fugitives (PM, PM_{10})	N/A	None
	LMF Fugitives (PM, PM_{10})	N/A	None
	Caster Fugitives (PM, PM_{10})	N/A	None

7.5.3 Applicable Provisions and Regulations

a. The material handling, stock piles, unpaved roads, paved roads and parking lots are “affected fugitive emissions” for the purpose of these unit-specific conditions, described in Section 7.5.2.

b. The affected fugitive emissions are subject to 35 IAC 212.301 which states:

> No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally

toward the zenith at a point beyond the property line of the source [35 IAC 212.301].

35 IAC 212.301 shall not apply and spraying pursuant to 35 IAC 212.304 through 212.310 and 212.312 shall not be required when the wind speed is greater than 40.2 km/hr (25 mph). Determination of wind speed for the purposes of this rule shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to this rule is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements [35 IAC 212.314].

c. If particulate collection equipment is operated pursuant to Sections 212.304 through 212.310 and 212.312 of this Subpart, emissions from such equipment shall not exceed 68 mg/dscm (0.03 gr/dscf) [35 IAC 212.313].

7.5.4 Non-Applicability of Regulations of Concern

a. 35 IAC 212.321 and 212.322 shall not apply to emission units, such as material handling, stock piles, unpaved roads, paved roads and parking lots of particulate matter, to which, because of disperse nature of such emission units, such rules can not reasonably be applied [35 IAC 212.323].

b. 35 IAC 212.316 shall not apply to emission units, such as material handling, stock piles, unpaved roads, paved roads and parking lots of particulate matter, because the units are not located in certain areas [35 IAC 212.324(a)(1)].

7.5.5 Control Requirements, Operating Requirements and Work Practices

The terms and conditions identified below shall be followed to assure compliance, pursuant to Section 39.5(7)(a) of the Act.

a. The material handling of affected fugitive emissions is subject to 35 IAC 212.307 and 212.308 which state:

i. All unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying pelletizing, screw conveying or other equivalent methods [35 IAC 212.307].

ii. Crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, conveyors, bagging operations, storage bins and fine product truck and railcar loading operations shall be sprayed with water or a surfactant solution, utilize

choke-feeding or be treated by an equivalent method in accordance with an operating program [35 IAC 212.308].

b. The stock piles of affected fugitive emissions is subject to 35 IAC 212.304 which states:

   i. All storage piles of materials with uncontrolled emissions of fugitive particulate matter in excess of 45.4 Mg per year (50 T/yr) which are located within a source whose potential particulate emissions from all emission units exceed 90.8 Mg/yr (100 T/yr) shall be protected by a cover or sprayed with a surfactant solution or water on a regular basis, as needed, or treated by an equivalent method, in accordance with the operating program required by Sections 212.309, 212.310 and 212.312 of this Subpart [35 IAC 212.304(a)].

   ii. Subsection (a) of this Section shall not apply to a specific storage pile if the owner or operator of that pile proves to the Agency that fugitive particulate emissions from that pile do not cross the property line either by direct wind action or re-entrainment [35 IAC 212.304(b)].

c. The unpaved roads, paved roads and parking lots of affected fugitive emissions are subject to 35 IAC 212.306 which states:

   All normal traffic pattern access areas surrounding storage piles specified in Section 212.304 of 35 IAC Subpart K and all normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program required by 212.309, 212.310 and 212.312 of 35 IAC Subpart K [35 IAC 212.306].

d. The affected fugitive emissions are subject to 35 IAC 212.309, 212.310 and 212.312 which states:

   i. The emission units described in Sections 212.304 through 212.308 of 35 IAC Subpart K shall be operated under the provisions of an operating program, consistent with the requirements set forth in Sections 212.310 and 212.312 of 35 IAC Subpart K, and prepared by the owner or operator and submitted to the Agency for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions [35 IAC 212.309(a)].

e. The operating program shall be amended from time to time by the owner or operator so that the operating program is current. Such amendments shall be consistent with 35 IAC Subpart K and shall be submitted to the Agency for its review [35 IAC 212.312].

f. As a minimum the operating program shall include the following [35 IAC 212.310]:

i. The name and address of the source;

ii. The name and address of the owner or operator responsible for execution of the operating program;

iii. A map or diagram of the source showing approximate locations of storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles and all normal traffic patterns within the source;

iv. Location of unloading and transporting operations with pollution control equipment;

v. A detailed description of the best management practices utilized to achieve compliance with this Subpart, including an engineering specification of particulate collection equipment, application systems for water, oil chemicals and dust suppressants utilized and equivalent methods utilized;

vi. Estimated frequency of application of dust suppressants by location of materials; and

vii. Such other information as may be necessary to facilitate the Agency's review of the operating program [35 IAC 212.310].

7.5.6 Production and Emission Limitations

Production and emission limitations are not set for the affected material handling, stock piles, unpaved roads, paved roads and parking lots of affected fugitive emissions. However, there are source-wide production and emission limitations set forth in Condition 5.6.

7.5.7 Testing Requirements

Testing requirements are not set for the affected material handling, stock piles, unpaved roads, paved roads and parking lots of affected fugitive emissions. However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.5.8 Monitoring Requirements

Monitoring requirements are set for the affected material handling, stock piles, unpaved roads, paved roads and parking lots of affected fugitive emissions per conditions 7.5.5 for Control Requirements and Work Practices, 7.5.9 for recordkeeping.

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected material handling, stock piles, unpaved roads, paved roads and parking lots of affected fugitive emissions to demonstrate compliance with Conditions 5.6.1 and 7.5.5, pursuant to Section 39.5(7)(b) of the Act:

a. Records of the application of water and/or chemical dust suppressants.

b. Records of material handling, i.e., slag, baghouse dust, lime in tons per month and tons per year.

c. Records of approximate miles traveled by vehicles on both paved and unpaved roads in miles per year.

e. Records of emissions in tons per year.

7.5.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected material handling, stock piles, unpaved roads, paved roads and parking lots of affected fugitive emissions with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

Emissions from or operation of the material handling, stock piles, unpaved roads, paved roads and parking lots of affected fugitive emissions in excess of the limits specified in Condition 7.5.3 or 5.6.1 within 30 days of such occurrence.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected material handling, stock piles, unpaved roads, paved roads and parking lots of affected fugitive emissions.

7.5.12 Compliance Procedures

a. Compliance with Condition 7.5.3 is demonstrated by the control requirements, work practices and the operating requirements of Condition 7.5.5.

b. Compliance with the emission limits in Conditions 5.6 shall be based on the recordkeeping requirements in Condition 7.5.9 and the emission factors and formulas listed below:

i. Emission factors for the material handling of affected fugitive emissions:

$$E = k(0.0032)(U/5)^{1.3}/(M/2)^{1.4}$$

E = emission factor (lb/ton), uncontrolled

k = particle size multiplier (0.74 for PM, 0.35 for PM_{10})

U = mean wind speed (9.5 mph)

M = moisture content (slag 0.92%, flue dust 1.0%, limestone 1.0%)

C.E. = Control Efficiency (%)

The emission factor is for material handling for iron and steel production from AP-42, Section 13.2.4, (dated 1/95).

A control efficiency of 85% due to partial enclosure was applied, based on January 1994 Texas Natural Resource Conservation Commission report “Emissions Calculations for Rock Crushing Facilities”.

Emission formula for the material handling of affected fugitive emissions:

(Emissions, lb) = (The Appropriate Emission Factor, lb/ton) x (Material Handled, tons) x (1-C.E./100)

ii. Emission factor equations for the stock piles of affected fugitive emissions:

E_a = 0.1[K][s/1.5][d/235] (active)

E_E = 0.5[s/1.5][d/235][f/15][D/90] (erosion)

E_A = Lb PM / ton of material put through storage

E_E = Lb PM / ton of material put through storage

K = Activity correction = 1.0

s = Material silt content (%)

d = Number of dry days per year

f = Percentage of time wind speed exceed 12 mph at 1 ft above ground

D = Duration of material stored (days)

Equations from USEPA guidance document “Particulate Emission Factors Applicable to The Iron and Steel Industry” (EPA-450/4-79-028)

Emissions, lb) = (Calculated Emission Factor, lb/ton) x (Material in Storage, tons)

iii. Emission factor equation for the unpaved roads of affected fugitive emissions:

$$E = k(s/12)^{a}(W/3)^{b}\ (365-p)/365)$$

E = Pounds of PM per vehicle mile traveled (lb/VMT)

K = particle size multiplier (4.9 for PM_{30}, 1.5 for PM_{10})

s = Surface material silt content (%) = 6.0

W = Mean vehicle weight (tons)

P = Number of days with at least 0.01 inch of rain per year

a = 0.7 for PM_{30}, 0.9 for PM_{10}, 0.9 for $PM_{2.5}$

b = 0.45 for PM_{30}, 0.45 for PM_{10}, 0.45 for $PM_{2.5}$

Equation from AP-42 Section 13.2.2 (dated 12/03)

(Emissions, lb) = (Calculated Emission Factor, lb/VMT) x (Vehicle Miles Traveled, miles)x [1-(CE/100)]

iv. Emission factor equation for the paved roads and parking lots of affected fugitive emissions:

$$E = 0.082(sL/2)^{0.65}(W/3)^{1.5}[(365-p)/365]$$

E = Pounds of PM per vehicle mile traveled (lb/VMT)

sL = Road surface silt loading (g/m^2) = 9.7

W = Mean vehicle weight (tons)

p = Number of days with at least 0.01 inch of rain per year

Equation from AP-42 Section 13.2.1 (dated 12/03)

(Emissions, lb) = (Calculated Emission Factor, lb/VMT) x (Vehicle Miles Traveled, miles)

v. Emission factors for the electric arc furnace of affected fugitive emissions:

Pollutant	Emission Factors (lb/ton)	Uncontrolled Emissions (%)
TSP	1.4	0.5%
PM_{10}	1.4	0.5%

Emission Factors from AP-42, Table 12.5-1

Fugitive emissions to the building openings: fugitive emissions (assumed to be 0.5% of uncontrolled emissions for TSP/PM_{10} of the melt shop baghouse) will be exhausted through the building openings.

Emission formulas for the electric arc furnace of affected fugitive emissions:

TSP (ton/yr) = (steel produced t/yr) x (emission factor lb/ton) x (uncontrolled emissions/100)

PM_{10} (ton/yr) = (0.58) x (steel produced t/yr) x (emission factor lb/ton) x (uncontrolled emissions/100)

vi. Emission factors for the ladle metallurgy furnace of affected fugitive emissions:

Pollutant	Emission Factor (lb/ton)	Controlled Emissions (C.E.) (%)
TSP	0.6	99%
PM_{10}	0.6	99%

Emission Factors from AP-42, Table 12.5-1

Emission formulas for the ladle metallurgy furnace of affected fugitive emissions that exhaust to through the building openings:

TSP (ton/yr) = (steel produced t/yr) x (emission factor lb/ton) x (1-(C.E./100))

PM_{10} (ton/yr) = (steel produced t/yr) x (emission factor lb/ton) x (1-(C.E./100))

vii. Emission factors for the scrap/alloy handling of affected fugitive emissions:

Pollutant	Emission Factor (lb/ton)	Controlled Emissions (C.E.) (%)
TSP/PM_{10}	0.00015	0.0%

Emission Factors from AP-42, Table 12.5-4

Emission formula for the scrap/alloy handling of affected fugitive emissions:

TSP/PM_{10} (ton/yr) = (material transferred t/yr) x (emission factor lb/ton)

viii. Emission factors for the continuous casting operations of affected fugitive emissions:

Pollutant	**Emission Factor (lb/ton)**	**Controlled Emissions (C.E.) (%)**
TSP/PM_{10}	**0.07**	**98.0%**

Emission Factors from AP-42 12.5.1 Minimills, Table 12.5.1-1.

Emission formula for the continuous casting operations of affected fugitive emissions:

TSP/PM_{10} (ton/yr) = (steel produced t/yr) x (emission factor lb/ton) x (1-(C.E./100))

7.6 Cooling Towers Fugitive Emissions

7.6.1 Description

Concast Cooling Tower and 14" Mill Cooling Tower are used for contact and non-contact cooling water. Small amount of emissions (drift) are emitted from the cooling towers.

Note: This narrative description is for informational purposes only and is not enforceable.

7.6.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
7.6	Concast Cooling Tower (PM, PM_{10})	Prior to 1972	None
	14" Mill Cooling Tower (PM, PM_{10})	Prior to 1972	None

7.6.3 Applicability Provisions and Applicable Regulations

a. The "affected cooling towers" for the purpose of these unit-specific conditions, is the equipment listed in Condition 7.6.2.

b. Each affected cooling tower is subject to 35 IAC 212.322(a), which provides that:

   i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 2) [35 IAC 212.322(a)].

7.6.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected cooling towers not being subject to 40 CFR Part 63, Subpart Q, Industrial Cooling Towers, because the cooling towers are not operated with chromium-based water treatment chemicals.

b. 35 IAC 212.316 shall not apply to the affected cooling towers, because the units are not located in certain areas [35 IAC 212.324(a)(1)].

7.6.5 Production and Emission Limitations

Production and emission limitations are not set for the affected cooling towers. However, there are source-wide production and emission limitations set forth in Condition 5.6.

7.6.6 Testing Requirements

Testing requirements are not set for the affected cooling towers. However, there are provisions for source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.6.7 Monitoring Requirements

Monitoring requirements are not set for the affected cooling towers.

7.6.8 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for each affected cooling towers to demonstrate compliance with Conditions 5.6.1, 7.6.3, 7.6.5 and 7.6.8, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of hours of operation at the maximum throughput rate.

b. The Permittee shall maintain records of emissions in tons/yr.

c. Maintenance log.

d. Inspections performed.

e. Throughput, gpm’s (average for each month).

7.6.9 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected cooling towers with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

i. Operation of the affected cooling towers in excess of the limits specified in Condition7.6.3 within 30 days of such occurrence.

7.6.10 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected cooling towers. Also, there are no provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.6.11 Compliance Procedures

a. Compliance with the emission limit shall be based on the recordkeeping requirements in Condition 7.6.8 and the emission factors and formulas listed below.

Pollutant	Emission Factor
PM_{10}	(Wt.) of Water Flow

PM_{10} Emission Rate (lb/hr) = .0001 x (water flow rate gal/min) x (Total Dissolved Solids lb $PM_{10}/10^6$ lbs drift) x (60 min/hr) (8.33 lb/gal)]

PM_{10} Annual Emissions (tons) = [(PM_{10} Emission Rate (lb/hr)) x (hr/yr)]/2,000 lb/ton)

Emission Formulas from AP-42, Chapter 13

Total Dissolved Solids:

14″ Tower: 1000
Concast Tower: 715

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after _____ (the date of issuance of the proposed permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

a. The changes do not violate applicable requirements;

b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;

c. The changes do not constitute a modification under Title I of the CAA;

d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and

e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:

i. Describe the physical or operational change;

ii. Identify the schedule for implementing the physical or operational change;

iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;

iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and

v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods if applicable test methods are not specified by the applicable regulations or otherwise identified in the conditions of this permit. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Conditions 8.6.3 and 8.6.4.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

Reports summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Illinois EPA every six months as follows, unless more frequent submittal of such reports is required in Sections 5 or 7 of this permit [Section 39.5(7)(f) of the Act]:

Monitoring Period	Report Due Date
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

a. The name and identification of the affected unit(s);

b. The person(s) who will be performing sampling and analysis and their experience with similar tests;

c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;

d. The specific determinations of emissions and operation that are intended to be made, including sampling and monitoring locations;

e. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods;

f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and

g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

a. The name and identification of the affected unit(s);

b. The date and time of the sampling or measurements;

c. The date any analyses were performed;

d. The name of the company that performed the tests and/or analyses;

e. The test and analytical methodologies used;

f. The results of the tests including raw data, and/or analyses including sample calculations;

g. The operating conditions at the time of the sampling or measurements; and

h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

a. Unless otherwise specified in the particular provision of this permit or in the written instructions distributed by the Illinois EPA for particular reports, reports and notifications shall be sent to the Illinois EPA - Air Compliance Unit with a copy sent to the Illinois EPA - Air Regional Field Office.

b. As of the date of issuance of this permit, the addresses of the offices that should generally be utilized for the submittal of reports and notifications are as follows:

i. Illinois EPA - Air Compliance Unit

Illinois Environmental Protection Agency
Bureau of Air
Compliance & Enforcement Section (MC 40)
P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA - Air Quality Planning Section

Illinois Environmental Protection Agency
Bureau of Air
Air Quality Planning Section (MC 39)
P.O. Box 19276
Springfield, Illinois 62794-9276

iii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

iv. USEPA Region 5 - Air Branch

USEPA (AR - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

c. Permit applications should be addressed to the Air Permit Section. As of the date of issuance of this permit, the address of the Air Permit Section is as follows:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

8.7 Title I Conditions

Notwithstanding the expiration date on the first page of this CAAPP permit, Title I conditions in this permit, which are identified by a T1, T1N, or T1R designation, remain in effect until such time as the Illinois EPA takes action to revise or terminate them in accordance with applicable procedures for action on Title I conditions. This is because these conditions either: (a) incorporate conditions of earlier permits that were issued by the Illinois EPA pursuant to authority that includes authority found in Title I of the CAA (T1 conditions), (b) were newly established in this CAAPP permit pursuant to authority that includes such Title I authority (T1N conditions), or (c) reflect a revision or combination of conditions established in this CAAPP permit (T1R conditions). (See also Condition 1.5.)

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule.

9.1.2 In particular, this permit does not alter or affect the following [Section 39.5(7)(j)(iv) of the Act]:

a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;

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

c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and

d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, pursuant to Section 39.5(7)(j) and (p) of the Act, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of

such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless this permit provides for such continued operation consistent with the Act and applicable Illinois Pollution Control Board regulations [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated there under.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents as may be required by law and in accordance with constitutional limitations, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Sections 4 and 39.5(7)(a) and (p)(ii) of the Act]:

a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;

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

c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

d. Sample or monitor any substances or parameters at any location:

i. At reasonable times, for the purposes of assuring permit compliance or applicable requirements; or

ii. As otherwise authorized by the CAA, or the Act.

e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and

f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any regulated activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply with Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. At a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].

b. Other records required by this permit including any logs, plans, procedures, or instructions required to be kept by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Air Quality Planning Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Unit, Air Regional Field Office, and USEPA Region 5 – Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining

the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.

b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.

c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act and applicable regulations [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as Attachment 1 to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

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 conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence [Section 39.5(7)(k) of the Act]:

i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency.

Note: For this purpose, emergency means a situation arising from sudden and reasonably unforeseeable events beyond the control of the source, as further defined by Section 39.5(7)(k)(iv) of the Act.

ii. The permitted source was at the time being properly operated;

iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and

iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.

b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations [Section 39.5(7)(k)(iv) of the Act].

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, revoked, reopened and reissued, or terminated for cause in accordance with applicable provisions of Section 39.5 of the Act. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit.

b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program.

c. The Illinois EPA or USEPA determines that this permit contains a material mistake or that inaccurate statement were made in establishing the emission standards or limitations, or other terms or conditions of this permit.

d. The Illinois EPA or USEPA determines that this permit must be revised or revoked to ensure compliance with the applicable requirements.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation and reissuance under Section 39.5(15) of the Act, pursuant to Sections 39.5(5)(e) and (i) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable. In the event of a challenge to any portion of the permit, other portions of the permit may continue to be in effect. Should any portion of this permit be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected and the rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

Upon the expiration of this permit, if the source is operated, it shall be deemed to be operating without a permit unless a timely and complete CAAPP application has been submitted for renewal of this permit. However, if a timely and complete application to renew this CAAPP permit has been submitted, the terms and all conditions of this CAAPP permit will remain in effect until the issuance of a renewal permit [Section 39.5(5)(l) and (o) of the Act].

Note: Pursuant to Sections 39.5(5)(h) and (n) of the Act, upon submittal of a timely and complete renewal application, the permitted source may continue to operate until final action is taken by the Illinois EPA on the renewal application, provided, however, that this protection shall cease if the applicant fails to submit any additional information necessary to evaluate or take final action on the renewal application as requested by the Illinois EPA in writing. For a renewal application to be timely, it must be submitted no later than 9 months prior to the date of permit expiration.

9.15 General Authority for the Terms and Conditions of this Permit

The authority for terms and conditions of this permit that do not include a citation for their authority is Section 39.5(7)(a) of the Act, which provides that the Illinois EPA shall include such provisions in a CAAPP permit as are necessary to accomplish the purposes of the Act and to assure compliance with all applicable requirements. Section 39.5(7)(a) of the Act is also another basis of authority for terms and conditions of this permit that do include a specific citation for their authority.

Note: This condition is included in this permit pursuant to Section 39.5(7)(n) of the Act.

10.0 ATTACHMENTS

Attachment 1 Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

Attachment 2 Emissions of Particulate Matter from Process Emission Units

a. New Process Emission Units for Which Construction or Modification Commenced On or After April 14, 1972 [35 IAC 212.321].

i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].

ii. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.321 shall be determined by using the equation [35 IAC 212.321(b)]:

$$E = A(P)^B$$

where:

P = Process weight rate; and
E = Allowable emission rate; and,

A. Up to process weight rates of 408 Mg/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lb/hr
A	1.214	2.54
B	0.534	0.534

B. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lb/hr
A	11.42	24.8
B	0.16	0.16

iii. Limits for Process Emission Units For Which Construction or Modification Commenced On or After April 19, 1972 [35 IAC 212.321(c)]:

Metric		English	
P	E	P	E
Mg/hr	kg/hr	T/hr	lb/hr
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.2	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.0	3.9	10.00	8.70
13.0	4.8	15.00	10.80
18.0	5.7	20.00	12.50
23.0	6.5	25.00	14.00
27.0	7.1	30.00	15.60
32.0	7.7	35.00	17.00
36.0	8.2	40.00	18.20
41.0	8.8	45.00	19.20
45.0	9.3	50.00	20.50
90.0	13.4	100.00	29.50
140.0	17.0	150.00	37.00
180.0	19.4	200.00	43.00
230.0	22.0	250.00	48.50
270.0	24.0	300.00	53.00
320.0	26.0	350.00	58.00
360.0	28.0	400.00	62.00
408.0	30.1	450.00	66.00
454.0	30.4	500.00	67.00

iv. For process weight rates of less than 100 pounds per hour, the allowable rate is 0.5 pounds per hour [35 IAC 266.110].

b. Existing Process Emission Units for Which Construction or Modification Prior to April 14, 1972 [35 IAC 212.322].

i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 [35 IAC 212.322(a)].

ii. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.322 shall be determined by using the equation [35 IAC 212.322(b)]:

$$E = C + A(P)^B$$

where:

P = Process weight rate; and
E = Allowable emission rate; and,

A. Up to process weight rates up to 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lb/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

B. For process weight rate in excess of 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lb/hr
A	25.21	55.0
B	0.11	0.11
C	- 18.4	- 40.0

iii. Limits for Process Emission Units For Which Construction or Modification Commenced Prior to April 14, 1972 [35 IAC 212.322(c)]:

Metric P Mg/hr	E kg/hr	English P T/hr	E lb/hr
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87
0.2	0.68	0.2	1.40
0.3	0.89	0.30	1.83
0.4	1.07	0.40	2.22
0.5	1.25	0.50	2.58
0.7	1.56	0.75	3.38
0.9	1.85	1.00	4.10
1.8	2.9	2.00	6.52
2.7	3.9	3.00	8.56
3.6	4.7	4.00	10.40
4.5	5.4	5.00	12.00
9.0	8.7	10.00	19.20
13.0	11.1	15.00	25.20
18.0	13.8	20.00	30.50
23.0	16.2	25.00	35.40
27.2	18.15	30.00	40.00
32.0	18.8	35.00	41.30
36.0	19.3	40.00	42.50
41.0	19.8	45.00	43.60
45.0	20.2	50.00	44.60
90.0	23.2	100.00	51.20
140.0	25.3	150.00	55.40
180.0	26.5	200.00	58.60
230.0	27.7	250.00	61.00
270.0	28.5	300.00	63.10
320.0	29.4	350.00	64.90
360.0	30.0	400.00	66.20
400.0	30.6	450.00	67.70
454.0	31.3	500.00	69.00

iv. For process weight rates of less than 100 pounds per hour, the allowable rate is 0.5 pounds per hour [35 IAC 266.110].

Attachment 3 Compliance Assurance Monitoring (CAM) Plan

Table 3.1 PSEU Designation:	EAF #7
Significant Emission Unit Section:	7.1
Pollutant:	PM

Indicators:	#1: Ductwork Static Pressure	#2: Baghouse Blower Motors
GENERAL CRITERIA		
THE MONITORING APPROACH USED TO MEASURE THE INDICATORS:	Negative pressure measured prior to baghouse.	Amperage load measured.
THE INDICATOR RANGE WHICH PROVIDES A REASONABLE ASSURANCE OF COMPLIANCE:	1-12 in H_2O (Observed during the 12/14-15/2008 performance test).	91-186 amps (Results listed include +/- 15% of the maximum and minimum amps observed during the 12/14-15/2008 performance test).
QUALITY IMPROVEMENT PLAN (QIP) THRESHOLD LEVELS:	If the daily reading is outside range >9 times within a 6-month period, QIP activated.	If motor overloaded >9 times within a 6-month period, QIP activated.
PERFORMANCE CRITERIA		
THE SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA:	Detector located prior to baghouse fan as specified in Title V Permit.	Motor amps logged by PLC and stored on server.
VERIFICATION PROCEDURES TO CONFIRM THE OPERATIONAL STATUS OF THE MONITORING:	Visual alert on furnace control screen that transducer is malfunctioning.	Visual alert on control screen that alerts of motor overload.
QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES THAT ENSURE THE VALIDITY OF THE DATA:	Annual calibration of pressure detector by outside contractor.	Ammeter zeroed when unit not operating. Drift is not expected.
THE MONITORING FREQUENCY:	One reading daily when the EAF is operating.	One reading daily when the EAF is operating.
THE DATA COLLECTION PROCEDURES THAT WILL BE USED:	Real time data from data acquisition system stored on server continuously.	Real time data from data acquisition system stored on server continuously.
THE DATA AVERAGING PERIOD FOR DETERMINING WHETHER AN EXCURSION OR EXCEEDANCE HAS OCCURRED:	Not applicable	Not applicable

Attachment 4 Guidance

The Illinois has prepared guidance for sources on the Clean Air Act Permit Program (CAAPP) that is available on the Internet site maintained by the Illinois EPA, www.epa.state.il.us. This guidance includes instructions on applying for a revision or renewal of the CAAPP permit.

Guidance On Revising A CAAPP Permit:

www.epa.state.il.us/air/caapp/caapp-revising.pdf

Guidance On Renewing A CAAPP Permit:

www.epa.state.il.us/air/caapp/caapp-renewing.pdf

The application forms prepared by the Illinois EPA for the CAAPP are also available from the Illinois EPA's Internet site:

www.epa.state.il.us/air/caapp/index.html

These CAAPP application forms should also be used by a CAAPP source when it applies for a construction permit. For this purpose, the appropriate CAAPP application forms and other supporting information, should be accompanied by a completed Application For A Construction Permit form (199-CAAPP) and Fee Determination for Construction Permit Application form (197-FEE):

www.epa.state.il.us/air/caapp/199-caapp.pdf
www.epa.state.il.us/air/permits/197-fee.pdf

LAK:psj