



<sup>1</sup> This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 - federal PSD and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

<sup>2</sup> Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

ISG Riverdale, Inc.  
13500 South Perry Avenue  
Riverdale, Illinois 60827-1182  
708/841-8383

I.D. No.: 031258AAI  
Standard Industrial Classification: 3312, Steel Works, Blast  
Furnaces (Including Coke Ovens  
and Rolling Mills)

1.2 Owner/Parent Company

International Steel Group, Inc.  
3250 Interstate Drive  
Richfield, Ohio 44286-9000

1.3 Operator

ISG Riverdale, Inc.  
13500 South Perry Avenue  
Riverdale, Illinois 60827-1182

General Manager  
708/849-8803 Ext. 2580

1.4 General Source Description

Molten iron is transported to the Riverdale plant where it is further processed at the Riverdale basic oxygen furnaces for the production of molten steel. The refined steel is then processed in the continuous caster and hot strip mill where it is finally coiled into the finished product.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

ACMA	Alternative Compliance Market Account
Act	Environmental Protection Act [415 ILCS 5/1 et seq.]
AIRS	Aerometric Information Retrieval System
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
BAT	Best Available Technology
BSO	Benzene Soluble Organics
Btu	British thermal unit
°C	Celsius
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CFR	Code of Federal Regulations
cm	Centimeter
CO	Carbon Monoxide
COE	Coke Oven Emissions
COG	Coke Oven Gas
ERMS	Emission Reduction Marketing System
°F	Fahrenheit
gal	gallon
HAP	Hazardous Air Pollutant
hr	hour
in	inch
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
kPa	Kilopascal
Kg	Kilogram
kW	kilowatts
l	Liter
LAER	Lowest Achievable Emission Rate
lb or Lb	pound
m <sup>3</sup>	Cubic meter
MACT	Maximum Achievable Control Technology
Mg	Megagram
min	Minute
mmBtu	Million British thermal units
mmscf	Million standard cubic foot
mo	month
MW-hr	Megawatt hours
N/A	Not Applicable
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	Nitrogen Oxides

NSPS	New Source Performance Standards
PM	Particulate Matter
PM <sub>10</sub>	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
psi	Pound per square inch
ppm	parts per million
PSD	Prevention of Significant Deterioration
RMP	Risk Management Plan
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
T1	Title I - Identifies Title I conditions that have been carried over from an existing construction permit
T1N	Title I New - Identifies Title I conditions that are being established in this permit
T1R	Title I Revision - Identifies Title I conditions that have been carried over from an existing construction permit and subsequently revised in this permit
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
VHAP	Volatile Hazardous Air Pollutant
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material
yr	Year

### 3.0 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:

One 250 Gallon Aboveground Tank (Gasoline)  
Motor Vehicle Fueling  
17 Annealing Furnaces (900,000 Btu/Hr Each)

- 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:

40 Miscellaneous Welders  
40 Miscellaneous Burning  
40 Miscellaneous Cutters  
20 Miscellaneous Grinders  
20 Miscellaneous Saws  
4 Bulk Liquid Storage Tanks  
40 Miscellaneous Painting  
Pollution Control Residual Mixing Area

- 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)].

Equipment used for filling drums, pails, or other packaging containers, excluding aerosol cans, with soaps, detergents, surfactants, lubricating oils, waxes, vegetable oils, greases, animal fats, glycerin, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(8)]

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 exclusively soaps, detergents, surfactants, glycerin, waxes, vegetable oils, greases, animal fats, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials [35 IAC 201.210(a)(17)].

Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials, provided an organic solvent has not been mixed with such materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(18)].

Cold cleaning degreasers that are not in-line cleaning machines, where the vapor pressure of the solvents used never exceed 2 kPa (15 mmHg or 0.3 psi) measured at 38°C (100°F) or 0.7 kPa (5 mmHg or 0.1 psi) at 20°C (68°F). [35 IAC 201.210(a)(19)]

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

### 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 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 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. 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.

- 3.2.3 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 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

### 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).



	Pickle Squeegee Roll Grinder	Pre 1972	Baghouse
07	- Paved Roadways	N/A	- Company or Contracted Dust Suppressant Application and Road Cleaning Equipment
	- Unpaved Roadways	N/A	
	Stock Piles	N/A	

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of NO<sub>x</sub>, PM, SO<sub>2</sub>, VOM, and HAPs emissions.

5.2 Applicable Regulations

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

5.2.2 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.
  - i. 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)].
  - ii. 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].
  - iii. 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].
- c. Unless subject to specific opacity or visible emissions limitations set forth in 35 IAC 212.442 through 212.452 or more specific limitations

contained in this permit, 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, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

- 5.2.3 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.
- 5.2.4 Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [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 Risk Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.
- 5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC 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 40 CFR Part 70 or 71.

- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

5.2.6 Episode Action Plan

- a. 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.
- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.
- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:
  - i. Illinois EPA, Compliance Section; and
  - ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
  - iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

5.2.7 PM<sub>10</sub> Contingency Measure Plan

This stationary source, as defined in 35 IAC 212.700, is required to prepare and submit a contingency measure plan reflecting the PM<sub>10</sub> emission reductions as set forth in 35 IAC 212.703. Such plan is incorporated by reference into this permit and shall be implemented in accordance with 35 IAC 212.704. The source shall comply with the applicable requirements of 35 IAC Part 212, Subpart U, incorporated herein by reference.

5.3 Non-Applicability of Regulations of Concern

None

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

## 5.5 Source-Wide Emission Limitations

### 5.5.1 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 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

#### Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	29.98
Sulfur Dioxide (SO <sub>2</sub> )	225.97
Particulate Matter (PM)	456.14
Nitrogen Oxides (NO <sub>x</sub> )	937.91
HAP, not included in VOM or PM	0.00
Total	1,649.30

### 5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

### 5.5.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

## 5.6 General Recordkeeping Requirements

### 5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 Records for Operating Scenarios

N/A

5.6.3 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.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of the source 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.

5.7.2 Annual Emissions Report

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

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

N/A



## 6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

### 6.1 Description of ERMS

The ERMS is a "cap and trade" market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as required by Section 182(c) of the CAA.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Participating sources must hold "allotment trading units" (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set in the sources' CAAPP permits. These allotments are established from historical VOM emissions or "baseline emissions" lowered to provide the emissions reductions from stationary sources required for reasonable further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source shall have sufficient ATUs in its transaction account to cover its actual VOM emissions during the preceding season. A transaction account's balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the transaction account database. The Illinois EPA will then retire ATUs in sources' transaction accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its transaction account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emissions reductions from an Emissions Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 35 IAC 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the "Alternative Compliance Market Account" (ACMA) (35 IAC 205.710). Sources may also transfer or sell the ATUs that they hold to other sources or participants (35 IAC 205.630).

### 6.2 Applicability

This source is considered a "participating source" for purposes of the ERMS, 35 IAC Part 205.

### 6.3 Obligation to Hold Allotment Trading Units (ATUs)

- a. Pursuant to 35 IAC 205.150(c)(1) and 35 IAC 205.720, and as further addressed by Condition 6.8, as of December 31 of each year, this source shall hold ATUs in its account in an amount not less than the ATU equivalent of its VOM emissions during the preceding seasonal allotment period (May 1 - September 30), not including VOM emissions from the following, or the source shall be subject to "emissions excursion compensation," as described in Condition 6.5.
  - i. VOM emissions from insignificant emission units and activities as identified in Section 3 of this permit, in accordance with 35 IAC 205.220;
  - ii. Excess VOM emissions associated with startup, malfunction, or breakdown of an emission unit as authorized in Section 7.0 of this permit, in accordance with 35 IAC 205.225;
  - iii. Excess VOM emissions to the extent allowed by a Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3);
  - iv. Excess VOM emissions that are a consequence of an emergency as approved by the Illinois EPA, pursuant to 35 IAC 205.750; and
  - v. VOM emissions from certain new and modified emission units as addressed by Condition 6.8(b), if applicable, in accordance with 35 IAC 205.320(f).
- b. Notwithstanding the above condition, in accordance with 35 IAC 205.150(c)(2), if a source commences operation of a major modification, pursuant to 35 IAC Part 203, the source shall hold ATUs in an amount not less than 1.3 times its seasonal VOM emissions attributable to such major modification during the seasonal allotment period, determined in accordance with the construction permit for such major modification or applicable provisions in Section 7.0 of this permit.

### 6.4 Market Transactions

- a. The source shall apply to the Illinois EPA for and obtain authorization for a Transaction Account prior to conducting any market transactions, as specified at 35 IAC 205.610(a).

- b. The Permittee shall promptly submit to the Illinois EPA any revisions to the information submitted for its Transaction Account, pursuant to 35 IAC 205.610(b).
- c. The source shall have at least one account officer designated for its Transaction Account, pursuant to 35 IAC 205.620(a).
- d. Any transfer of ATUs to or from the source from another source or general participant must be authorized by a qualified Account Officer designated by the source and approved by the Illinois EPA, in accordance with 35 IAC 205.620, and the transfer must be submitted to the Illinois EPA for entry into the Transaction Account database.

#### 6.5 Emissions Excursion Compensation

Pursuant to 35 IAC 205.720, if the source fails to hold ATUs in accordance with Condition 6.3, it shall provide emissions excursion compensation in accordance with the following:

- a. Upon receipt of an Excursion Compensation Notice issued by the Illinois EPA, the source shall purchase ATUs from the ACMA in the amount specified by the notice, as follows:
  - i. The purchase of ATUs shall be in an amount equivalent to 1.2 times the emissions excursion; or
  - ii. If the source had an emissions excursion for the seasonal allotment period immediately before the period for the present emissions excursion, the source shall purchase ATUs in an amount equivalent to 1.5 times the emissions excursion.
- b. If requested in accordance with paragraph (c) below or in the event that the ACMA balance is not adequate to cover the total emissions excursion amount, the Illinois EPA will deduct ATUs equivalent to the specified amount or any remaining portion thereof from the ATUs to be issued to the source for the next seasonal allotment period.
- c. Pursuant to 35 IAC 205.720(c), within 15 days after receipt of an Excursion Compensation Notice, the owner or operator may request that ATUs equivalent to the amount specified be deducted from the source's next seasonal allotment by the Illinois EPA, rather than purchased from the ACMA.

#### 6.6 Quantification of Seasonal VOM Emissions

- a. The methods and procedures specified in Sections 5 and 7 of this permit for determining VOM emissions and compliance with VOM emission limitations shall be used for determining seasonal VOM emissions for purposes of the ERMS, with the following exceptions [35 IAC 205.315(b)]:

No Exceptions

- b. The Permittee shall report emergency conditions at the source to the Illinois EPA, in accordance with 35 IAC 205.750, if the Permittee intends to deduct VOM emissions in excess of the technology-based emission rates normally achieved that are attributable to the emergency from the source's seasonal VOM emissions for purposes of the ERMS. These reports shall include the information specified by 35 IAC 205.750(a), and shall be submitted in accordance with the following:
  - i. An initial emergency conditions report within two days after the time when such excess emissions occurred due to the emergency; and
  - ii. A final emergency conditions report, if needed to supplement the initial report, within 10 days after the conclusion of the emergency.

#### 6.7 Annual Account Reporting

- a. For each year in which the source is operational, the Permittee shall submit, as a component of its Annual Emissions Report, seasonal VOM emissions information to the Illinois EPA for the seasonal allotment period. This report shall include the following information [35 IAC 205.300]:
  - i. Actual seasonal emissions of VOM from the source;
  - ii. A description of the methods and practices used to determine VOM emissions, as required by this permit, including any supporting documentation and calculations;
  - iii. A detailed description of any monitoring methods that differ from the methods specified in this permit, as provided in 35 IAC 205.337;
  - iv. If a source has experienced an emergency, as provided in 35 IAC 205.750, the report shall reference the associated emergency conditions report that has been approved by the Illinois EPA;

- v. If a source's baseline emissions have been adjusted due to a Variance, Consent Order, or CAAPP permit Compliance Schedule, as provided for in 35 IAC 205.320(e)(3), the report shall provide documentation quantifying the excess VOM emissions during the season that were allowed by the Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3); and
- vi. If a source is operating a new or modified emission unit for which three years of operational data is not yet available, as specified in 35 IAC 205.320(f), the report shall specify seasonal VOM emissions attributable to the new emission unit or the modification of the emission unit.

- b. This report shall be submitted by November 30 of each year, for the preceding seasonal allotment period.

#### 6.8 Allotment of ATUs to the Source

- a.
  - i. The allotment of ATUs to this source is 317 ATUs per seasonal allotment period.
  - ii. This allotment of ATUs reflects the Illinois EPA's determination that the source's baseline emissions were 31.7458 tons per season.
  - iii. The source's allotment reflects 88% of the baseline emissions (12% reduction), except for the VOM emissions from specific emission units excluded from such reduction, pursuant to 35 IAC 205.405, including units complying with MACT or using BAT, as identified in Condition 6.11 of this permit.
  - iv. ATUs will be issued to the source's Transaction Account by the Illinois EPA annually. These ATUs will be valid for the seasonal allotment period following issuance and, if not retired in this season, the next seasonal allotment period.
  - v. Condition 6.3(a) becomes effective beginning in the seasonal allotment period following the initial issuance of ATUs by the Illinois EPA into the Transaction Account for the source.
- b. Contingent Allotments for New or Modified Emission Units

N/A

- c. Notwithstanding the above, part or all of the above ATUs will not be issued to the source in circumstances as set forth in 35 IAC Part 205, including:
  - i. Transfer of ATUs by the source to another participant or the ACMA, in accordance with 35 IAC 205.630;
  - ii. Deduction of ATUs as a consequence of emissions excursion compensation, in accordance with 35 IAC 205.720; and
  - iii. Transfer of ATUs to the ACMA, as a consequence of shutdown of the source, in accordance with 35 IAC 205.410.

#### 6.9 Recordkeeping for ERMS

The Permittee shall maintain copies of the following documents as its Compliance Master File for purposes of the ERMS [35 IAC 205.700(a)]:

- a. Seasonal component of the Annual Emissions Report;
- b. Information on actual VOM emissions, as specified in detail in Sections 5 and 7 of this permit and Condition 6.6(a); and
- c. Any transfer agreements for the purchase or sale of ATUs and other documentation associated with the transfer of ATUs.

#### 6.10 Federal Enforceability

Section 6 becomes federally enforceable upon approval of the ERMS by USEPA as part of Illinois' State Implementation Plan.

#### 6.11 Exclusions from Further Reductions

- a. VOM emissions from the following emission units shall be excluded from the VOM emissions reductions requirements specified in 35 IAC 205.400(c) and (e) as long as such emission units continue to satisfy the following [35 IAC 205.405(a)]:
  - i. Emission units that comply with any NESHAP or MACT standard promulgated pursuant to the CAA;
  - ii. Direct combustion emission units designed and used for comfort heating purposes, fuel combustion emission units, and internal combustion engines; and

iii. An emission unit for which a LAER demonstration has been approved by the Illinois EPA on or after November 15, 1990.

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because they meet the criteria as indicated above [35 IAC 205.405(a) and (c)]:

Boiler #5 (Riverdale)  
Boiler #6  
Boiler #7

b. VOM emissions from emission units using BAT for controlling VOM emissions shall not be subject to the VOM emissions reductions requirement specified in 35 IAC 205.400(c) or (e) as long as such emission unit continues to use such BAT [35 IAC 205.405(b)].

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because these emission units use BAT for controlling VOM emissions as indicated above [35 IAC 205.405(b) and (c)]:

None

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit 01: Boilers

Control 01: N/A

7.1.1 Description

ISG Riverdale Inc. utilizes three (3) boilers in the facility for the production of process steam and building heat. Boilers #5 through #7 located at the Riverdale Facility combust only natural gas.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
01	Boiler #5 - 60 mmBtu/Hr Boiler #6 - 60 mmBtu/Hr Boiler #7 - 120 mmBtu/Hr	None

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected boilers" for the purpose of these unit-specific conditions, is Boilers #5, #6, and #7 located at the Riverdale Location listed in Condition 7.1.2.
- b. No person shall cause or allow the emission of carbon monoxide into the atmosphere from the affected boilers to exceed 200 ppm, corrected to 50 percent excess air on a per boiler basis [35 IAC 216.121].
- c. The affected boilers are subject to the applicable limits identified in Condition 5.2.2.

7.1.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected boilers not being subject to the New Source Performance Standards (NSPS) 40 CFR 60, Subpart D, because the firing rates of these boilers are less than 250 mmBtu/Hr.
- b. The affected boilers are not subject to 35 IAC 215.301, Use of Organic Material, pursuant to 35 IAC 215.303, Fuel Combustion Emission Sources, which excludes the affected boilers from this requirement.

7.1.5 Operational and Production Limits and Work Practices

Affected Boilers #5, #6, and #7 at the Riverdale location shall combust only natural gas.

7.1.6 Emission Limitations

In addition to Condition 5.2.2, the affected boilers are subject to the following:

There are no specific emission limitations for this unit.

7.1.7 Operating Requirements

None

7.1.8 Inspection Requirements

None

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected boilers, pursuant to Section 39.5(7)(b) of the Act:

- a. Total natural gas usage for the affected boilers (mmscf/yr) (Note mm = 1,000,000)

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of the affected boilers 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. Notification within 30 days following the occurrence of a violation of the affected boilers with the conditions of this section with a copy of such record for each incident.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.1.12 Compliance Procedures

- a. Compliance with Condition 7.1.3(b) and 7.1.3(c) is considered to be assured by the normal work practices

and maintenance activities inherent in operation of the affected boilers.

b. Emission calculations shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission factors and formula listed below:

i. Emissions from the affected Boilers #5 through #7 located at the Riverdale facility burning natural gas shall be calculated based on the following emission factors and formula below:

PM (Lb/mmscf)	PM <sub>10</sub> (Lb/mmscf)	SO <sub>2</sub> (Lb/mmscf)	VOM (Lb/mmscf)	NO <sub>x</sub> (Lb/mmscf)	CO (Lb/mmscf)
6.2	6.2	0.6	2.78	140	35

- Gas Boiler Emissions (tons) = [(natural gas consumed (mmscf)) x (the appropriate emission factor (Lb/mmscf))]/2000 Lb/ton

The above emission factors are referenced from AP-42, natural gas combustion, Tables 1.4-1 through 1.4-3.

7.2 Unit 02: Basic Oxygen Furnace Processes  
 Control 02: Baghouses, Electrostatic Precipitator

7.2.2 Description

ISG Riverdale Inc. utilizes basic oxygen furnace processes for the production of molten steel. Molten iron from the blast furnaces are loaded into torpedo cars and railed to the basic oxygen furnaces where it is reladled, desulfurized, and slag skimmed. At the basic oxygen furnaces scrap, molten iron from the blast furnaces, coke, and fluxes are added, an oxygen lance lowered into the furnace to refine the mixture and finally tapped to extract the usable molten steel. The molten steel is then transferred to the caster, rolled, and coiled to its finished product.

Emission Unit	Description	Emission Control Equipment
02	- Flux Unloading	N/A
	- Flux Transfer	Flux Transfer Baghouse
	- Hot Metal Transfer	Desulfurization Baghouse
	- Hot Metal Desulfurization	Desulfurization Baghouse
	- Hot Metal Slag Skimming	Desulfurization Baghouse
	- BOF Charging	Desulfurization Baghouse
	- BOF Blowing	Electrostatic Precipitator
	- BOF Tapping and Ladle Additions	Desulfurization Baghouse
	- BOF Slag Tapping, Dumping and Conditioning	Desulfurization Baghouse
	- BOF ESP Flue Dust Handling	N/A
	- Ladle Preheating (4)	N/A
	- Ladle Drying	N/A
	- Ladle Relining	N/A
	- Ladle Lancing/Skull & Scrap Burning	N/A

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected basic oxygen furnace processes" for the purpose of these unit-specific conditions, are the processes listed in Condition 7.2.2.
- b. The affected basic oxygen furnace processes are subject to the emission limits identified in Condition 5.2.2.
- c. Malfunction and Breakdown Provisions

In the event of a malfunction or breakdown of the following basic oxygen furnace processes or associated controls (hot metal transfer, hot metal desulfurization, hot metal slag skimming, BOF charging, BOF blowing, BOF tapping, BOF slag tapping and dumping, Ladle preheating, Ladle drying, Ladle relining, electrostatic precipitator, and desulfurization baghouse), the Permittee is authorized to continue operation of the basic oxygen furnace processes or controls in violation of the applicable requirement of 35 IAC Part 212, as necessary to prevent risk of injury to personnel or severe damage to equipment. This authorization is subject to the following requirements:

- i. The Permittee shall repair the damaged feature(s) of the basic oxygen furnace processes or controls as soon as practicable.
- ii. During periods of malfunction of the basic oxygen furnace processes or controls, the basic oxygen furnace processes or controls may continue to operate until all liquid metal already in the BOF vessels upon occurrence of the malfunction and breakdown is processed.
- iii. In the event of malfunction or breakdown of the basic oxygen furnace processes or controls, liquid metal in the vessels at the BOF may be poured into alternate receptacles (e.g. ingot molds, troughs, pans, etc.), until all liquid metal already in the BOF vessels upon occurrence of the malfunction or breakdown is processed.
- iv. In the event of a malfunction or breakdown at the basic oxygen furnace, liquid metal in the vessels at the BOF may be beached (dumping molten metal on ground) only as follows:

1. Beaching shall be allowed only in the event that alternate receptacles are not available; and
  2. Beaching shall be allowed only if all reasonable measures are taken to minimize the duration of such emissions and to minimize emissions such that visible emissions shall not cross the property line during such an occurrence.
- v. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Conditions 7.2.9(a) and 7.2.10(a).
- vi. Reasonable measures shall be taken to minimize emissions during malfunction or breakdown.
- d. The affected flux unloading, flux transfer, hot metal slag skimming, BOF charging, BOF blowing, BOF tapping, BOF slag tapping and dumping, and ladle reline, processes are subject to 35 IAC 212.322(c) which states:

Limits for Process Emission Units For Which Construction or Modification Commenced Prior to April 14, 1972

Metric		English	
P	E	P	E
Mg/hr	Kg/hr	T/hr	lbs/hr
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87
0.2	0.68	0.20	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.	8.7	10.00	19.20
13.	11.1	15.00	25.20
18.	13.8	20.00	30.50
23.	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

Where:

P = Process weight rate in Mg/hr or T/hr, and

E = Allowable emission rate in Kg/hr or  
lbs/hr. [35 IAC 212.322(c)]

- e. The affected flux unloading, flux transfer, hot metal transfer, hot metal desulfurization, ESP Flu Dust Handling, ladle reline, and ladle lancing is 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]

- f. Emissions of PM<sub>10</sub> from the BOF additive transfer system (flux transfer system) baghouse stack shall not exceed .0075 gr/scf and 1.53 lb/hr.
- g. Emissions of PM<sub>10</sub> from all openings of the BOF shop, (e.g. the roof monitor), shall not exceed 28.19 lb/hr total. Compliance with this limit shall be determined using the following emission factors unless another factor is requested by the Permittee and approved by the Illinois EPA: 0.1905 lb/ton steel for proper operation of the BOF with only the ESP and 0.178 lb/ton for proper operation of the BOF with the ESP and desulfurization baghouse.
- h. Visible emissions from any opening in the BOF shop (e.g. roof monitor) shall not exceed 20% opacity on a 3 minute rolling average basis. Opacity shall be determined in accordance with the observation procedures set out in 40 CFR Part 60, Appendix A, Method 9 including the requirement that readings be

taken by a certified observer, except that compliance shall be determined by averaging any 12 consecutive observations taken at 15 second intervals. Opacity from the openings of the BOF shop shall be accomplished at least weekly. Observations shall be conducted for at least an hour or the entire BOF cycle, whichever is greater.

- i. Emissions of PM<sub>10</sub> from the desulfurization baghouse stack shall not exceed 10.22 lb/hr and the concentration specified below:

Flow Rate (acfm)	Emission Concentration (gr/dscf)
< 242,335	0.0052
242,335 - 247,133	0.0051
247,134 - 252,125	0.0050
252,126 - 257,323	0.0049
257,324 - 262,741	0.0048

- j. Emissions of particulate matter from basic oxygen processes shall be controlled as follows:
  - i. Charging, Refining and Tapping. Particulate matter emissions from all basic oxygen furnaces (BOF) shall be collected and ducted to pollution control equipment. Unless subsection (c) of this Section applies, emissions from basic oxygen furnace operations during the entire cycle (operations from the beginning of the charging process through the end of the tapping process) shall not exceed the allowable emission rate specified by Section 212.321 or Section 212.322 of this Part, whichever is applicable. For purposes of computing the process weight rate for this subsection, nongaseous material charged to the furnace and process oxygen shall be included. No material shall be included more than once. [35 IAC 212.446]
  - ii. Hot Metal Transfer, Hot Metal Desulfurization and Ladle Lancing.
    - 1. Particulate matter emissions from hot metal transfers to a mixer or ladle, hot metal desulfurization operations and ladle lancing shall be collected and ducted to pollution control equipment, and emissions

from the pollution control equipment shall not exceed 69 mg/dscm (0.03 gr/dscf).

2. If the owner or operator can establish that the total particulate matter emissions from hot metal transfers, hot metal desulfurization operations and ladle lancing operations combined do not exceed the allowable emissions as specified by Section 212.321 or Section 212.322, whichever is applicable, where the process weight rate (P) is the hot metal charged to the BOF vessel, then subsection (b)(1) above shall not apply.
- k. The Permittee shall maintain the BOF emission control system (including the ESP and desulfurization baghouse) in a manner that assures compliance with the conditions of this permit.
  - l. Emissions of PM<sub>10</sub> from the BOF electrostatic precipitator (ESP) stack shall not exceed 43.71 lb/hr and 183.58 tons/yr. Emissions of PM<sub>10</sub> (filterable only) from the BOF ESP stack shall not exceed 0.026 gr/dscf, 30.33 lb/hr and 127.19 tons/yr.
  - m. The affected BOF ESP Flu Dust Handling is subject to 35 IAC 212.316(f) which states:

Emission Limitation for all other emission units. unless an emission unit has been assigned a particulate matter, PM<sub>10</sub>, or fugitive particulate matter emissions limitation elsewhere in this Section or in Subpart R of this Part, no person shall cause or allow fugitive particulate matter emissions from any emission unit to exceed an opacity of 20 percent. [35 IAC 212.316(f)]
  - n. The Permittee shall prevent particulate matter from escaping the ESP dust collection room by keeping it wholly enclosed, except during loading/unloading operations.
  - o. The affected BOF ESP Flu Dust Handling is subject to 35 IAC 212.309 which states:
    - i. The emission units described in Sections 212.304 through 212.308 and Sections 212.316 of this Subpart shall be operated under the provisions of an operating program, consistent

with the requirements set forth in Sections 212.310 and 212.312 of this Subpart, and prepared by the owner or operator and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions.

- ii. The amendment to this Section incorporating the applicability of Section 212.316 shall apply by May 11, 1993, or upon initial start-up, whichever occurs later. [35 IAC 212.309]

7.2.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on some of the affected basic oxygen furnace processes not being subject to 35 IAC 212.321 or 212.322 because some of these processes are exempt in accordance with 35 IAC 212.441.

7.2.5 Control Requirements

N/A

7.2.6 Emission Limitations

In addition to Condition 5.2.2, the affected ladle preheating is subject to the following:

Total combined operations and emissions from the two horizontal ladle preheaters (identified as being manufactured by North American Mfg. Co.) shall not exceed the following limits:

- a. Emissions from the two ladle preheaters is limited to the following.

NO <sub>x</sub> (ton/yr)	CO (ton/yr)	PM <sub>10</sub> (ton/yr)
7.65	1.61	0.92

These limits are based on the maximum natural gas usage, continuous operation of 8,760 hr/yr, standard AP-42 emission factors, and a heating value for natural gas of 1,030 Btu/ft<sup>3</sup>. Compliance with annual limits shall be determined from a running total of 12 months of data.

The above limitations were established in Permit 95090223, 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].

- b. PM<sub>10</sub> emissions from the BOF electrostatic precipitator stack (ESP) shall not exceed the following.

PM <sub>10</sub> (ton/yr)	PM <sub>10</sub> (Filterable) (ton/yr)
183.58	127.19

The above limitations were established in Permit 93040047, 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 Operating and Testing Requirements

- a. The Permittee shall maintain a spare motor and bearings on hand for the fans of the BOF ESP, desulfurization baghouse and the fugitive emissions capture system so any common failures can be repaired within 12 hours, and any more serious failures can be repaired within 36 hours.
- b. The Permittee shall repair any leaks from BOF vessel enclosures, hooding and ducts used to capture and transport emissions for the BOF emission control system or areas otherwise noted to be in need of repair as soon as practicable.
- c. The Permittee shall operate the BOF ESP control system as follows:
  - i. The minimum current set point for the ESP fans during charging and refining shall be 60 amp.
  - ii. The minimum induced duct draft pressure set point measured at the cooling tower exit duct shall be 0.6 inches of water at initiation of

refining process and 2.0 inches of water during the remainder of the operation.

- iii. The cooling tower water and hood spray water flow rates shall be monitored to assure proper flow during the various phases of the refining process.
- d. In accordance with Consent Decree No. 92 CH 10020, the Permittee shall comply with the following:
  - i. The Permittee shall maintain and utilize a color T.V. monitor equipped with a recorder to record and attempt to identify any excess visible emissions from the ESPs.
  - ii. The Permittee shall at all times have on staff a certified opacity reader.
  - iii. The Permittee shall prevent particulate matter from escaping the ESP dust collection room by keeping it wholly enclosed.
  - iv. Video tapes used to demonstrate compliance with Condition 7.2.7(d)(i) shall be retained at the facility for one (1) year. Please note this condition takes precedence over Condition 5.6.3.
- e. Natural gas usage for the two ladle preheaters (identified as being manufactured by North American Mfg. Co.) shall not exceed 153.08 million ft<sup>3</sup>/yr.
- f. Natural gas shall be the only fuel fired in the two ladle preheaters (identified as being manufactured by North American Mfg. Co.).
- g. The Permittee is subject to the following provision until the Furnace A casthouse baghouse becomes fully operational at which time the limit would be void: Production from the BOF shall not exceed 1,200,000 tons/year. Compliance shall be determined on a monthly basis from the sum of the data for the current month plus the previous 11 months.

#### 7.2.8 Inspection and Monitoring Requirements

- a. The desulfurization and BOF fugitive capture system ducting to the desulfurization baghouse shall be controlled by an automated monitoring and actuation system that displays the fan current and duct damper

position and a semi-automatic program which will actuate the various dampers to apportion the available fan capacity to the operative process to maximize emission control. Initially, the dampers will be set to apportion the available airflow according to the scenarios depicted in Table 3 of construction permit 93040047. Those scenarios and the semi-automatic program will be adjusted to maximize fugitive emission control.

- b. At least monthly, the Permittee shall visually inspect all visible BOF vessel enclosures, hooding and ducts used to capture and transport emissions for the BOF emissions control system.

#### 7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the basic oxygen furnace processes pursuant to Section 39.5(7)(b) of the Act:

- a. Records for Malfunctions and Breakdowns

The Permittee shall maintain records, pursuant to 35 IAC 201.263, of continued operation of a basic oxygen furnace subject to 35 IAC Part 212 during malfunctions and breakdown of the control features of the basic oxygen furnace process, which as a minimum, shall include:

- i. Date and duration of malfunction or breakdown;
- ii. A detailed explanation of the malfunction or breakdown;
- iii. An explanation why the damaged feature(s) could not be immediately repaired or the basic oxygen furnace removed from service without risk of injury to personnel or severe damage to equipment;
- iv. The measures used to reduce the quantity of emissions and the duration of the event;
- v. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity; and
- vi. The amount of release above typical emissions during malfunction/breakdown.

- b. The Permittee shall maintain records of required observations of the opacity from the openings of the BOF shop. The records shall include, at a minimum, the date and time of observations, individual opacity readings and calculated opacity relative to the applicable limit, (e.g. 20% opacity on a three minute rolling average basis).
- c. The Permittee shall maintain records of throughput for hot metal reladling, desulfurization, and slag skimming operations (tons/day and tons/year).
- d. The Permittee shall maintain records of the following in accordance with 35 IAC 212.324(g).
  - i. Written records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment shall be kept in accordance with subsection (f) of this Section.
  - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made.
  - iii. A written record of the inventory of all spare parts for air pollution control equipment not readily available from local suppliers shall be kept and updated.
  - iv. Copies of all records required by this Section shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.
  - v. The records required under this Section shall be kept and maintained for at least three (3) years and shall be available for inspection and copying by Illinois EPA representatives during working hours.

- vi. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made. [35 IAC 212.324(g)]
- e. The Permittee shall keep an operating log for the BOF ESP emissions control system that includes the following:
  - i. Operating time of the BOF.
  - ii. Operating time of the capture system and performance parameters, e.g. static pressure in the main duct and current drawn by fan motors.
  - iii. Operating time of the ESP and parameters, e.g. voltage and current.
  - iv. Operating time of the desulfurization baghouse and operating parameters, e.g. pressure drop.
  - v. All routine and non-routine maintenance performed, including dates and duration of outages, repair actions, and replacements.
- f. The Permittee shall record the desulfurization and BOF fugitive capture system fan current and damper position for each process (i.e. for each desulfurization of molten iron at the desulfurization station and each charging, refining, and tapping of metal in the BOF) of each steel production cycle.
- g. The Permittee shall keep operating records for the BOF's and associated control equipment and a maintenance log for the associated control equipment.
- h. The Permittee shall maintain records of the steel production in the BOF (daily, monthly, and annual in tons of steel).
- i. The Permittee shall maintain a log of the visual inspections of the BOF vessel enclosures and capture

and control system that includes observations of the physical appearance of the capture system and any noted deficiencies (e.g. the presence of any holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion).

j. The Permittee shall operate and maintain a monitoring system that measures and records for each process of each steel production cycle the static pressure in the main duct to the ESP emission capture and control system. This monitoring system shall be used to ensure sufficient draft is maintained in the emission capture hood and ducts so as to maximize emissions capture and minimize uncaptured emissions and emissions leaks.

k. The affected BOF ESP Flu Dust Handling System is subject to 35 IAC 212.316 (g) which states:

i. The owner or operator of any fugitive particulate matter emission unit subject to this Section shall keep written records of the application of control measures as may be needed for compliance with the opacity limitations of this Section and shall submit to the Illinois EPA an annual report containing a summary of such information.

ii. The records required under this subsection shall include at least the following:

1. The name and address of the source;
2. The name and address of the owner and/or operator of the source;
3. A map or diagram showing the location of all emission units controlled;
4. A description of the control measures used.

iii. Copies of all records required by this Section shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA and shall be transmitted to the Illinois EPA by a company-designated person with authority to release such records.

iv. The records required under this Section shall be kept and maintained for at least three (3)

years and shall be available for inspection and copying by Illinois EPA representatives during working hours.

- v. A quarterly report shall be submitted to the Illinois EPA stating the following: the dates any necessary control measures were not implemented, a listing of those control measures, the reasons that the control measures were not implemented, and any corrective actions taken. This information includes, but is not limited to, those dates when controls were not applied based on a belief that application of such control measures would have been unreasonable given prevailing atmospheric conditions, which shall constitute a defense to the requirements of this Section. This report shall be submitted to the Illinois EPA thirty (30) calendar days from the end of a quarter. Quarters end March 31, June 30, September 30, and December 31.  
[35 IAC 212.316(g)]
- l. The Permittee shall maintain the natural gas usage (mmft<sup>3</sup>/mo and mmft<sup>3</sup>/yr) for the two horizontal ladle preheaters (identified as being manufactured by North American Mfg. Co.).
- m. The Permittee shall maintain the natural gas usage (mmft<sup>3</sup>/mo and mmft<sup>3</sup>/yr) for the ladle dryers.
- n. The Permittee shall maintain records on the amount of refractory removed from the ladle reline operations (ton/mo and ton/yr).
- o. The Permittee shall maintain records on the amount of steel lanced (ton/mo and ton/yr).
- p. The Permittee shall maintain records on the amount of flux purchased (ton/mo and ton/yr).
- q. The Permittee shall maintain records of the hot metal transferred (daily, monthly, and annual in ton).

#### 7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of the affected basic oxygen furnace processes 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:

Notification within 30 days following the occurrence of a violation of the affected basic oxygen furnace process with the conditions of this section with a copy of such record for each incident.

a. Reporting of Malfunctions and Breakdowns for Basic Oxygen Furnace Process

The Permittee shall provide the following notification and reports to the Illinois EPA, Compliance Section and Regional Field Office, pursuant to 35 IAC 201.263, concerning continued operation of a basic oxygen furnace subject to Condition 7.2.3(c) during malfunction or breakdown of the control features of the basic oxygen furnace.

- i. The Permittee shall notify the Illinois EPA's regional office by telephone as soon as possible during normal working hours, but no later than three (3) working days, upon the occurrence of noncompliance due to malfunction or breakdown. Notification may be made by leaving a message.
- ii. Upon achievement of compliance, the Permittee shall give a written follow-up notice to the Illinois EPA, Compliance Section and Regional Field Office, providing a detailed explanation of the event, an explanation why continued operation of the basic oxygen furnace was necessary, the length of time during which operation continued under such conditions, the measures taken by the Permittee to minimize and correct deficiencies with chronology, and when the repairs were completed or when the basic oxygen furnace was taken out of service.
- iii. If compliance is not achieved within 5 working days of the occurrence, the Permittee shall submit interim status reports to the Illinois EPA, Compliance Section and Regional Field Office, within 5 days of the occurrence and every 14 days thereafter, until compliance is achieved. These interim reports shall provide a brief explanation of the nature of the malfunction or breakdown, corrective actions accomplished to date, actions anticipated to occur with schedule, and the expected date on

which repairs will be complete or the basic oxygen furnace will be taken out of service.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

a. Emission calculations shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formula listed below:

i. Emission Calculations from Flux Unloading

Emission Factors for Flux Unloading

PM (lbs PM/ton Flux)	PM <sub>10</sub> (lbs PM <sub>10</sub> /ton Flux)
0.0267	0.0126

Emission factors are calculated from AP-42, section 13.2.4.3

- $PM/PM_{10}$  Emissions (tons) =  $[(121.3^* \text{ lb flux/ton steel}) \times (\text{Steel Produced (ton steel)}) \times (\text{appropriate emission factor (lb PM/ton flux)}) \times (\text{ton flux/2000 lb flux}) \times (1 - \text{control efficiency (\%)})] / 2000 \text{ lb/ton}$

\* Calculated from 1997 operating data.

ii. Emission Calculations From Flux Transfer (Uncaptured and Uncontrolled)

Emission Factors For Flux Transfer

PM (lbs PM/ton Flux)	PM <sub>10</sub> (lbs PM <sub>10</sub> /ton Flux)
0.0267	0.0126

Emission factors are calculated from AP-42, section 13.2.4.3 at 0.7% moisture and wind speed of 10.4 mph

- $PM/PM_{10}$  Emissions (tons) =  $[(\text{No. of material transfers}) \times (121.3^* \text{ lb flux/ton steel}) \times (\text{Steel Produced (ton steel)}) \times (\text{appropriate emission factor (lb PM/ton flux)}) \times (\text{ton flux/2000 lb flux}) \times (1 - \text{capture efficiency (\%)})] / 2000 \text{ lb/ton}$

\* Calculated from 1997 operating data.

iii. Emission Calculations From Flux Transfer  
(Captured and Controlled)

Emission Factors For Flux Transfer

PM (lbs PM/ton Flux)	PM <sub>10</sub> (lbs PM <sub>10</sub> /ton Flux)
0.0267	0.0126

Emission factors are calculated from AP-42, section 13.2.4.3 at 0.7% moisture and wind speed of 10.4 mph

- $PM/PM_{10}$  Emissions (tons) = [(No. of material transfers) x (121.3\* lb flux/ton steel) x (Steel Produced (ton steel) x (appropriate emission factor (lb PM/ton flux)) x (ton flux/2000 lb flux) x (1-control efficiency (%)) x (.80)]/2000 lb/ton

\* Calculated from 1997 operating data.

iv. Emission Calculations From Hot Metal Transfer  
(Uncaptured and Uncontrolled)

Emission Factors For Hot Metal Transfer

PM (lbs PM/ton Hot Metal Transferred)	PM <sub>10</sub> (lbs PM <sub>10</sub> /ton Hot Metal Transferred)	VOM (lbs VOM/ton Hot Metal Transferred)
0.19	0.0900	0.001

Emission factors are referenced from FIRE version 6.1 for Steel Production SCC 3-03-009-15

- $PM/PM_{10}$  Emissions (tons) = [(hot metal transferred (ton)) x (appropriate emission factor (lb/ton metal)) x (1-capture efficiency (%))]/2000 lb/ton
- VOM Emissions (tons) = [(hot metal transferred (ton)) x (appropriate emission factor (lb/ton metal)) x (1-capture efficiency (%))]/2000 lb/ton

v. Emission Calculations From Hot Metal Desulfurization (Uncaptured and Uncontrolled)

Emission Factors For Hot Metal Desulfurization

PM (lb PM/ton Hot Metal Transferred)	PM <sub>10</sub> (lb PM <sub>10</sub> /ton Hot Metal Transferred)
1.09	0.2200

Emission factors are referenced from AP-42 Table 12.5-1 and 12.5-2 Particulate Emission Factors for Iron and Steel

- $PM/PM_{10}$  Emissions (tons) = [(hot metal desulfurized (tons)) x (appropriate emission factor (lb/ton hot metal transferred)) x (1-capture efficiency (%))]/2000lb/ton

vi. Emission Calculations From Hot Metal Slag Skimming (Uncaptured and Uncontrolled)

Emission Factors For Hot Metal Slag Skimming

PM (lb PM/ton Slag)	PM <sub>10</sub> (lb PM/ton Slag)	VOM (lb VOM/ton Slag)
0.19	0.0900	0.001

Emission factors are referenced from FIRE ver 6.1 for Steel Production SCC 3-03-009-15

- $PM/PM_{10}$  Emissions (tons) = [(hot metal transferred (tons)) x (.03 ton slag/ton hot metal\*) x (appropriate emission factor (lb/ton of slag)) x (1-capture efficiency (%))]/2000lb/ton
- VOM Emissions (tons) = [(hot metal transferred (tons)) x (.03 ton slag/ton hot metal\*) x (appropriate emission factor (lb/ton of slag)) x (1-capture efficiency (%))]/2000lb/ton
- \* Assuming that slag is 1% sulfur, the desulfurization slag process rate is .03 tons of desulfurized slag per ton of hot metal desulfurized.

vii. Emission Calculations From Desulfurization Baghouse (Captured and Controlled)

Emission Factors For Desulfurization Baghouse

PM (gr/dscfm)	PM <sub>10</sub> (gr/dscfm)
0.0052	0.0052

Emission factors are from permit condition for flow rates less than 242,335 acfm.

$$\text{PM/PM}_{10} \text{ Emissions (tons)} = [(\text{flowrate (dscfm)}) \times (\text{appropriate emission factor (gr/dscfm)}) \times (.00014 \text{ (lb/grain)})] / 2,000 \text{ lb/ton}$$

vii. Emission Calculations From BOF Charging (Uncaptured and Uncontrolled)

Emission Factors For BOF Charging

PM (lb PM/ton Steel Refined)	PM <sub>10</sub> (lb PM <sub>10</sub> /ton Steel Refined)	VOM (lb VOM/ton Steel Refined)
0.6	0.300	0.0010

PM/PM<sub>10</sub> emission factors are referenced from FIRE ver 6.1 SCC 3-03-009-16 for Steel Production.

VOM emission factor is referenced from AIRS, BOF charging, SCC 3-03-009-16.

- PM/PM<sub>10</sub> Emissions (tons) = [(steel refined (ton)) x (appropriate emission factor (lb PM/ton steel refined)) x (1-capture efficiency (%))]/2,000 lb/ton
- VOM Emissions (tons) = [(steel refined (ton)) x (appropriate emission factor (lb PM/ton steel refined)) x (1-capture efficiency (%))]/2,000 lb/ton

ix. Emission Calculations From BOF Blowing (Uncaptured and Uncontrolled)

Emission Factors For BOF Blowing

PM (lb PM/ton Steel Refined)	PM <sub>10</sub> (lb PM/ton Steel Refined)	VOM (lb VOM/ton Steel Refined)	SO <sub>2</sub> (lb SO <sub>2</sub> /ton Steel Refined)	NO <sub>x</sub> (lb NO <sub>x</sub> /ton Steel Refined)	CO (lb CO/ton Steel Refined)
28.5	13.1	0.0010	0.19	0.107	45

PM, PM<sub>10</sub>, and VOM emission factors are referenced from FIRE ver 6.1, SCC 3-03-009-16 and 3-03-009-13 for steel production.

SO<sub>2</sub> and NO<sub>x</sub> emission factors are based on BOF stack tests that was conducted on 11/05/97.

CO emission factor is based on BOF stack test conducted on April 23 and April 25, 1996.

- Emissions (tons) = [(steel refined (tons)) x (appropriate emission factor (lb/ton steel refined)) x (1-capture efficiency (%))]/2,000 lb/ton

x. Emission Calculations From BOF Tapping (Uncaptured and Uncontrolled)

Emission Factors For BOF Tapping

PM (lb PM/ton Steel Refined)	PM <sub>10</sub> (lb PM/ton Steel Refined)	VOM (lb VOM/ton Steel Refined)	NO <sub>x</sub> (lb NO <sub>x</sub> /ton Steel Refined)
0.92	0.400	0.0010	0.02

Emission factors are referenced from FIRE ver 6.1 SCC 3-03-009-17 for Steel production.

- Emissions (tons) = [(steel refined (tons)) x (appropriate emission factor (lb/ton steel refined)) x (1-capture efficiency (%))]/2,000 lb/ton

xi. Emission Calculations From BOF Slag Tapping and Dumping (Uncaptured and Uncontrolled)

Emission Factors For Slag Tapping and Dumping

PM (lb PM/ton Steel Refined)	PM <sub>10</sub> (lb PM <sub>10</sub> /ton Steel Refined)	VOM (lb VOM/ton Steel Refined)

0.19	0.090	0.0010
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Emission factors are referenced from AIRS for steel production SCC 3-03-009-15 and 3-03-009-23.

- Emissions (tons) = [(steel refined (tons)) x (.19 (ton slag/ton steel)) x (appropriate emission factor (lb/ton steel refined)) x (1-capture efficiency (%))]/2,000 lb/ton

xii. Emission Calculations For BOF Electrostatic Precipitator

Emission Factors For ESP

PM (gr/dscfm)	PM <sub>10</sub> (gr/dscfm)	VOM (lb VOM/ton steel refined)	SO <sub>2</sub> (lb SO <sub>2</sub> /ton steel refined)	NO <sub>x</sub> (lb NO <sub>x</sub> /ton steel refined)	CO (lb CO/ton steel refined)
0.0066	0.0072	0.017	0.183	0.428	16.451

VOM, SO<sub>2</sub>, NO<sub>x</sub>, and CO emission factors are referenced from a stack test dated 11/5/97.

Particulate emission factors are referenced from stack test dated 11/17/97.

- Emission (tons) = [(BOF production (tons steel)) x (appropriate emission factor (lb/ton steel refined))]/2000 lb/ton

xiii. Emission Calculations For BOF Flue Dust Handling (Uncaptured and Uncontrolled)

Emission Factors For BOF Flue Dust Handling

PM (lb PM/ton Dust)	PM <sub>10</sub> (lb PM <sub>10</sub> /ton Dust)
0.0584	0.0276

Emission factors are calculated from AP-42 Section 11.2.3.3, Emissions for flue dust handling with 0.7% moisture and a wind speed of 10.4 mph.

- PM/PM<sub>10</sub> Emissions (tons) = [(number of transfers) x (.012 (ton dust/ton steel)) x (steel produced (ton steel)) x

(appropriate emission factor (lb/ton dust))]/2,000 lb/ton

xiv. Emission Calculations For Ladle Preheat

Emission Factors For Ladle Preheat

PM (lb/mmscf )	PM <sub>10</sub> (lb/mmscf )	VOM (lb/mmscf )	SO <sub>2</sub> (lb/mmscf )	NO <sub>x</sub> (lb/mmscf )	CO (lb/mmscf )
12	12	2.78	0.6	100	21

Emission factors are referenced from AP-42 Table 1.4-1, Emission factors for natural gas combustion.

- Emissions (tons) = [(natural gas usage (mmscf)) x (appropriate emission factor (lb/mmscf))]/2,000 lb/ton

xv. Emission Calculations For Ladle Drying

Emission Factors For Ladle Drying

PM (lb/mmscf )	PM <sub>10</sub> (lb/mmscf )	VOM (lb/mmscf )	SO <sub>2</sub> (lb/mmscf )	NO <sub>x</sub> (lb/mmscf )	CO (lb/mmscf )
4.5	4.5	2.78	0.6	100	21

Emission factors are referenced from AP-42 Table 1.4-1, Emission factors for natural gas combustion.

- Emissions (tons) = [(natural gas usage (mmscf)) x (appropriate emission factor (lb/mmscf))]/2,000 lb/ton

xvi. Emission Calculations For Ladle Reline

Emission Factors For Ladle Reline

PM (lb PM/ton Refractory)	PM <sub>10</sub> (lb PM <sub>10</sub> /ton Refractory)
0.0182	0.0086

Emission factors are referenced from AP-42 Section 13.2.4.3, with a moisture content of 0.92% and wind speed of 10.4 mph.

- Emissions (tons) = [(refractory removed (ton)) x (appropriate emission factor (lb/ton refractory))]/2,000 lb/ton

xvii. Emission Calculations For Ladle Lancing (Uncaptured and Uncontrolled)

Emission Factors For Ladle Lancing

PM (lb PM/ton Molten Steel)	PM <sub>10</sub> (lb PM <sub>10</sub> /ton Molten Steel)
0.1	0.1

Emission factors are referenced from FIRE ver 6.1 SCC 3-03-009-32 from steel scarfing. Ladle lancing emissions are considered to be equivalent to scarfing based on experience and engineering knowledge.

- Emissions (tons) = [(molten steel lanced (ton)) x (appropriate emission factor (lb/ton lanced))]/2,000 lb/ton
- Compliance with Condition 7.2.3(c) is demonstrated by the required recordkeeping and reporting requirements of Conditions 7.2.9(a) and 7.2.10(a).
  - Compliance with Condition 7.2.3(d) is demonstrated by using steel production records and appropriate emission factors and capture and control efficiencies. Resulting emissions less than the calculated process weight rate will be considered in compliance.
  - Compliance with Condition 7.2.3(f) is demonstrated by the latest stack test results.
  - Compliance with Condition 7.2.3(g) is demonstrated by the approved emission factors and steel throughput for the basic oxygen furnace.
  - Compliance with Condition 7.2.3(h) is demonstrated by weekly method 9 opacity readings.
  - Compliance with Condition 7.2.3(i) and 7.2.3(l) is demonstrated by the latest stack test results.
  - Compliance with Condition 7.2.3 (m) is demonstrated by maintaining the ESP dust handling room doors in a

closed position, except when performing loading/unloading operations.

- i. Compliance with Condition 7.2.3(o) is demonstrated by operating in accordance with the operating program.

7.3 Unit 03: Continuous Caster  
Control 03: Baghouse

7.3.1 Description

ISG Riverdale Inc. uses a continuous caster to cast the liquid steel into thin slabs. The thin slabs are then cut to length and the temperature equalized in a tunnel furnace that feeds the hot strip mill.

7.3.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
03	- Ladle Metallurgy Facility	Baghouse
	- Tundish Preheating and Drying	N/A
	- Miscellaneous Heaters	N/A
	- Continuous Caster	N/A
	- Tunnel Furnace	N/A
	- Hot Strip Mill	N/A

7.3.3 Applicability Provisions and Applicable Regulations

- a. The "affected continuous caster processes" for the purpose of these unit-specific conditions, is all processes listed in Condition 7.3.2.
- b. Malfunction and Breakdown Provisions

In the event of a malfunction or breakdown of the following continuous caster processes or associated controls (ladle metallurgy, continuous caster, tunnel furnace, and hot strip mill), the Permittee is authorized to continue operation of the continuous caster processes or controls in violation of the applicable requirement of 35 IAC Part 212, as necessary to prevent risk of injury to personnel or severe damage to equipment. This authorization is subject to the following requirements:

- i. The Permittee shall repair the damaged feature(s) of the basic oxygen furnace processes or controls as soon as practicable.

- ii. The Ladle metallurgy facility may continue to operate until the processing of material in progress is complete, i.e., until all liquid metal already in the BOF vessel upon occurrence of the malfunction or breakdown is processed.
  - iii. The continuous caster, tunnel furnace and hot strip mill may continue to operate until the processing of material in progress is complete, i.e., until all liquid metal already in the BOF vessels upon occurrence of the malfunction or breakdown is processed.
  - iv. A. In the event of malfunction or breakdown at either the continuous caster or hot strip mill, liquid metal at the vessels in the BOF may be poured into alternate receptacles (e.g., ingot molds, troughs, pans, etc.), until all liquid metal already in the BOF vessels upon occurrence of the malfunction or breakdown is processed.  
  
B. In the event of malfunction or breakdown at either the continuous caster or hot strip mill, liquid metal in the vessels at the BOF may be beached only as follows:
    - 1. Beaching shall be allowed only in the event that alternate receptacles are not available; and
    - 2. Beaching shall be allowed only if all reasonable measures are taken to minimize the duration of such emission and to minimize emissions such that visible emissions shall not cross the property line during such an occurrence.
  - v. Reasonable measures shall be taken to minimize emissions during malfunction and breakdown.
  - vi. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Conditions 7.3.9(a) and 7.3.10(a).
- c. Emissions of PM<sub>10</sub> from the LMF baghouse stack shall not exceed 3.6 lb/hr.

- d. The affected Ladle Metallurgy facility, tundish drying and preheating, continuous caster, and tunnel furnace is subject to 35 IAC 212.123 which states:
  - 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 Section 212.122 of this Subpart.
  - ii. The emission 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 emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1,000 ft) 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]
- e. Operation of tundish drying and preheating shall not exceed 23.4 mmBtu/hr (combined maximum firing rate of all units). Compliance with this limit shall be determined as a monthly average.
- f. Operation of miscellaneous heaters shall not exceed 7.0 mmBtu/hr (combined firing rate). Compliance with this limit shall be determined as a monthly average.
- g. Ladle shrouds and submerged entry nozzles shall be used to transfer liquid steel from the ladle to the tundish and from the tundish into the continuous caster, pursuant to 35 IAC 212.450.
- h. Operation of the tunnel furnace shall not exceed 123.0 mmBtu/Hr.

#### 7.3.4 Non-Applicability of Regulations of Concern

This permit is issued based on the affected continuous caster charging processes not being subject to 35 IAC 212.321 or 212.322 because of the exemption in 35 IAC 212.441.

#### 7.3.5 Control Requirements

N/A

### 7.3.6 Emission Limitations

In addition to Condition 5.2.2, the affected continuous caster processes are subject to the following:

- a. Emissions from the ladle metallurgy facility (LMF) shall not exceed the following:

PM (lb/day)	PM (ton/yr)	PM <sub>10</sub> (lb/day)	PM <sub>10</sub> (ton/yr)
152.66	27.86	116.11	21.19

- b. Emissions from the tundish preheating and drying shall not exceed the following:

NO <sub>x</sub> (ton/yr)	CO (ton/yr)	PM (ton/yr)	PM <sub>10</sub> (ton/yr)	VOM (ton/yr)	SO <sub>2</sub> (ton/yr)
14.35	3.59	1.43	1.43	0.29	0.06

- c. Emissions from the miscellaneous heaters shall not exceed the following:

NO <sub>x</sub> (ton/yr)	CO (ton/yr)	PM (ton/yr)	PM <sub>10</sub> (ton/yr)	VOM (ton/yr)	SO <sub>2</sub> (ton/yr)
3.07	0.64	0.36	0.36	0.16	0.02

- d. Emissions from the continuous caster shall not exceed the following:

PM (lb/day)	PM (ton/yr)	PM <sub>10</sub> (lb/day)	PM <sub>10</sub> (ton/yr)
4.88	0.89	4.88	0.89

- e. Emissions from the tunnel furnace shall not exceed the following:

NO <sub>x</sub> (ton/yr)	CO (ton/yr)	PM (ton/yr)	PM <sub>10</sub> (ton/yr)	VOM (ton/yr)	SO <sub>2</sub> (ton/yr)
92.12	21.55	1.62	1.62	0.76	0.32

- f. VOM emissions from the hot strip mill shall not exceed the following:

VOM (ton/yr)	VOM (lb/day)
12	65.75

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].

The above limitations were established in Permit 93040047, 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].

7.3.7 Operating Requirements

N/A

7.3.8 Inspection Requirements

N/A

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected continuous caster processes, pursuant to Section 39.5(7)(b) of the Act:

a. Records for Malfunctions and Breakdowns

The Permittee shall maintain records, pursuant to 35 IAC 201.263, of continued operation of a continuous caster process subject to 35 IAC Part 212 during malfunctions and breakdown of the control features of the continuous caster process, which as a minimum, shall include:

- i. Date and duration of malfunction or breakdown;
- ii. A detailed explanation of the malfunction or breakdown;
- iii. An explanation why the damaged feature(s) could not be immediately repaired or the continuous caster process removed from service without risk of injury to personnel or severe damage to equipment;

- iv. The measures used to reduce the quantity of emissions and the duration of the event;
  - v. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity; and
  - vi. The amount of release above typical emissions during malfunction/breakdown.
- b. The Permittee shall maintain operating records for the ladle metallurgy facility that include the following:
- i. Operating time of the ladle metallurgy facility.
  - ii. Operating time of the capture system.
  - iii. Operating time of the baghouse
  - iv. A maintenance log, that details all routine and non-routine maintenance performed, including dates and duration of outages, inspection schedule, repair actions, and replacements.
- c. The Permittee shall maintain records of the liquid steel processed by the ladle metallurgy facility (daily, monthly, and annual in tons).
- d. The Permittee shall keep operating records for the following continuous caster processes (ladle metallurgy facility, continuous caster, hot strip mill, and associated controls) and a maintenance log for the associated control equipment.
- e. The Permittee shall maintain records of natural gas consumption for the tundish drying and preheating (monthly and annual in mmscf).
- f. The Permittee shall maintain records of natural gas consumption for the miscellaneous heaters (monthly and annual in mmscf).
- g. The Permittee shall maintain records of the liquid steel charged to the continuous caster (daily, monthly, and annual in tons).

- h. The Permittee shall maintain records of natural gas consumption for the tunnel furnace (monthly and annual in mmscf).
- i. The Permittee shall maintain records of the steel processed by the hot strip mill (daily, monthly, and annual in tons).
- j. The Permittee shall maintain records on the operating hours (hr/mo and hr/yr) for the affected continuous caster processes.

#### 7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of an affected continuous caster process 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:

Notification within 30 days following the occurrence of a violation of the affected continuous caster process with the conditions of this section with a copy of such record for each incident.

- a. Reporting of Malfunctions and Breakdowns for continuous caster processes

The Permittee shall provide the following notification and reports to the Illinois EPA, Compliance Section and Regional Field Office, pursuant to 35 IAC 201.263, concerning continued operation of a continuous caster process subject to Condition 7.3.3(b) during malfunction or breakdown of the control features of the continuous caster process.

- i. The Permittee shall notify the Illinois EPA's regional office by telephone as soon as possible during normal working hours, but no later than three (3) days, upon the occurrence of noncompliance due to malfunction or breakdown.
- ii. Upon achievement of compliance, the Permittee shall give a written follow-up notice to the Illinois EPA, Compliance Section and Regional Field Office, providing a detailed explanation of the event, an explanation why continued

operation of the continuous caster process was necessary, the length of time during which operation continued under such conditions, the measures taken by the Permittee to minimize and correct deficiencies with chronology, and when the repairs were completed or when the continuous caster process was taken out of service.

- iii. If compliance is not achieved within 5 working days of the occurrence, the Permittee shall submit interim status reports to the Illinois EPA, Compliance Section and Regional Field Office, within 5 days of the occurrence and every 14 days thereafter, until compliance is achieved. These interim reports shall provide a brief explanation of the nature of the malfunction or breakdown, corrective actions accomplished to date, actions anticipated to occur with schedule, and the expected date on which repairs will be complete or the continuous caster process will be taken out of service.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

- a. Emission calculations shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formula listed below:

- i. Emission Calculations from the Ladle Metallurgy Facility

Controlled Emission Factors For Ladle Metallurgy

Max PM (lb PM/ton Steel in LMF)	Max PM <sub>10</sub> (lb PM <sub>10</sub> /ton Steel in LMF)	Typical PM (lb PM/ton Steel in LMF)	Typical PM <sub>10</sub> (lb PM <sub>10</sub> /ton Steel in LMF)
0.0430	0.0327	0.0088	0.0048

Typical emission factors are referenced from a stack test performed on 5/98

Max Emission factors are referenced from permit 93040047.

- Emissions (tons) = [(steel processed in LMF (ton)) x (appropriate emission factor (lb/ton steel in LMF))]/2000 lb/ton

ii. Emission Calculations from Tundish Preheating and Drying

Emission Factors for Tundish Preheating

PM (lb/mmscf)	PM <sub>10</sub> (lb/mmscf)	VOM (lb/mmscf)	SO <sub>2</sub> (lb/mmscf)	NO <sub>x</sub> (lb/mmscf)	CO (lb/mmscf)
6.2	6.2	2.78	0.6	140	35

Emission factors are referenced from AP-42, Table 1.4-1, Emission factors for natural gas combustion

- Emissions (tons) = [(gas usage (mmscf)) x (appropriate emission factor (lb/mmscf))]/2000 lb/ton

Emission Factors for Tundish Drying

PM (lb/mmscf)	PM <sub>10</sub> (lb/mmscf)	VOM (lb/mmscf)	SO <sub>2</sub> (lb/mmscf)	NO <sub>x</sub> (lb/mmscf)	CO (lb/mmscf)
4.5	4.5	2.78	0.6	100	21

Emission factors are referenced from AP-42, Table 1.4-1, Emission factors for natural gas combustion

- Emissions (tons) = [(gas usage (mmscf)) x (appropriate emission factor (lb/mmscf))]/2000 lb/ton

iii. Emission Calculations from Miscellaneous Heaters

Emission Factors For Miscellaneous Heaters

PM (lb/mmscf)	PM <sub>10</sub> (lb/mmscf)	VOM (lb/mmscf)	SO <sub>2</sub> (lb/mmscf)	NO <sub>x</sub> (lb/mmscf)	CO (lb/mmscf)
4.5	4.5	2.78	0.6	100	21

Emission factors are referenced from AP-42, Table 1.4-1, Emission factors for natural gas combustion

- Emissions (tons) = [(gas usage (mmscf)) x (appropriate emission factor (lb/mmscf))]/2000 lb/ton\

iv. Emission Calculations From Continuous Caster

Emission Factors For Continuous Caster

PM (lb/ton Casted)	PM <sub>10</sub> (lb/ton Casted)
0.0014	0.0014

Emission factors are referenced from continuous caster permit #93040047

- Emissions (tons) = [(steel cast (tons)) x (appropriate emission factor (lb/ton cast))]/2000 lb/ton

v. Emission Calculations From Tunnel Furnace

Emission Factors For Tunnel Furnace

PM (lb/mmscf )	PM <sub>10</sub> (lb/mmscf )	VOM (lb/mmscf )	SO <sub>2</sub> (lb/mmscf )	NO <sub>x</sub> (lb/mmscf )	CO (lb/mmscf )
3.1	3.1	1.41	0.6	171	40

PM, PM<sub>10</sub>, VOM, and SO<sub>2</sub> emission factors are referenced from AP-42, Table 1.4-2, Emission factors for natural gas combustion

NO<sub>x</sub> and CO emission factors are referenced from continuous caster permit #93040047.

- Emissions (tons) = [(gas usage (mmscf)) x (appropriate emission factor (lb/mmscf))]/2000 lb/ton

vi. Emission Calculations From Hot Strip Mill

Emission Factor For Hot Strip Mill

Typical and Max VOM (lb/ton Steel Milled)
0.020

Emission factor is referenced from Continuous Caster Permit #93040047

- Emissions (tons) = [(steel thru Mill (tons)) x (emission factor (lb/ton steel))]/2000 lb/ton

- b. Compliance with Condition 7.3.3 (b) is demonstrated by the required recordkeeping and reporting requirements of Conditions 7.3.9(a) and 7.3.10(a).
- c. Compliance with Condition 7.3.3(c) is demonstrated by the most recent stack test.
- d. Compliance with Condition 7.3.3(g) is demonstrated by utilizing ladle shrouds and submerged entry nozzles.

7.4 Unit 04: Steel Pickling and Rinsing  
 Control 04: Sieve Tray Scrubber

7.4.1 Description

ISG Riverdale Inc. uses pickling tanks and rinse tanks to treat some of the steel before selling to customers. After hot rolling, the steel coils from the hot mill are uncoiled and pickled. The pickling process consists of passing the steel strip through a dilute solution of hydrochloric acid to remove the oxide scale contained on the steel strip. Pickled steel coil is then pulled through a rinse tank to remove residual HCL solution. Fumes from pickling and rinsing are captured and processed in a scrubber.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
04	- Steel Pickling and Rinsing (4 Lines)	2 Sieve Tray Scrubbers

7.4.3 Applicability Provisions and Applicable Regulations

- a. The "affected pickling process" for the purpose of these unit-specific conditions, is the process listed in Condition 7.4.2.
- b. The sieve tray scrubber control devices shall be operated at all times that the steel pickling tanks and pickling rinse tanks are in operation.
- c. Emissions of PM<sub>10</sub> from the sieve tray scrubbers stack controlling the steel pickling tanks and pickling rinse tanks shall no exceed 1.033 lb/hr. Compliance with the hourly limit shall be determined as a daily average emission rate.
- d. No person shall cause or allow emissions of PM<sub>10</sub>, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one hour period: 45.8 mg/scm (0.02 gr/scf) from the pickling process at a steel plant in the Village of Riverdale [35 IAC 212.458(b)(5)]
- e. The mass emission limits contained in subsection (b) of this Section shall not apply to those emission units with no visible emissions other than that of fugitive particulate matter; however, if a stack test

is performed, this subsection is not a defense to a finding of a violation of the mass emission limits contained in subsection (b) of this Section. [35 IAC 212.458(c)]

- f. The affected pickling process is subject to the emission limits identified in Condition 5.2.2.
- g. The affected pickling process is subject to 35 IAC 212.123 which states:
  - 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 Section 212.122 of this Subpart.
  - ii. The emission 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 emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) 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]

7.4.4 Non-Applicability of Regulations of Concern

N/A

7.4.5 Control Requirements

N/A

7.4.6 Emission Limitations

In addition to Condition 5.2.2, the affected pickling process is subject to the following:

There are no specific emission limitations for this unit.

7.4.7 Operating Requirements

N/A

7.4.8 Inspection Requirements

- a. For any process emission unit subject to subsection (a) of this Section, the owner or operator shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in this Section shall be met at all times. This Section shall not affect the applicability of 35 Ill. Adm. Code 201.149. Proper maintenance shall include the following minimum requirements:
  - i. Visual inspections of air pollution control equipment;
  - ii. Maintenance of an adequate inventory of spare parts; and
  - iii. Expeditious repairs, unless the emission unit is shutdown. [35 IAC 212.324(f)]

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected pickling process, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain records of the following in accordance with 35 IAC 212.324(g).
  - i. Written records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment shall be kept in accordance with subsection (f) of this Section.
  - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state

what corrective actions were taken and what repairs were made.

- iii. A written record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
  - iv. Copies of all records required by this Section shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.
  - v. The records required under this Section shall be kept and maintained for at least three (3) years and shall be available for inspection and copying by Illinois EPA representatives during working hours.
  - vi. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made. [35 IAC 212.324(g)]
- b. The Permittee shall maintain records of the amount of steel pickled (ton/mo and ton/yr).
  - c. The Permittee shall maintain records on the operating hours (hr/mo and hr/yr) for the affected pickling process.

#### 7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of an affected pickling process 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:

Notification within 30 days following the occurrence of a violation of the affected pickling process with the conditions of this section with a copy of such record for each incident.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

a. Emission calculations shall be based on the recordkeeping requirements in Condition 7.4.9 and the emission factors and formula listed below:

i. Captured Emission Calculations from the Pickling Process

Captured Scrubber Emission Factors for Pickling Process

PM (lb PM/ton Steel Pickled)	PM <sub>10</sub> (lb PM <sub>10</sub> /ton Steel Pickled)
0.0043	0.0043

Emission factors are referenced from a stack test performed on 5/93

- Emissions (tons) = [(steel pickled (ton)) x (appropriate emission factor (lb/ton steel pickled))]/2000 lb/ton

ii. Uncaptured Emissions Calculations from the Pickling Process

Uncaptured Emission Factors for Pickling Process

PM (Lb PM/ton Steel Pickled)	PM <sub>10</sub> (Lb PM <sub>10</sub> /ton Steel Pickled)
0.150	0.150

Emission factors are referenced from a stack test performed on 5/93

- Emissions (tons) = [(steel pickled (ton)) x (appropriate emission factor (lb/ton steel pickled))]/2000 lb/ton

b. Compliance with Conditions 7.4.3(c) and 7.4.3(d) is demonstrated by the most recent stack test.

7.5 Unit 05: Strip Oiling  
Control 05: N/A

7.5.1 Description

The strip oiling process consists of coating the steel strip with either a rolling or rust preventative oil.

7.5.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
05	Strip Oiling	N/A

7.5.1 Applicability Provisions and Applicable Regulations

- a. The "affected strip oiling process" for the purpose of these unit-specific conditions, is the process listed in Condition 7.5.2.
- b. The VOM content of the coating used on the strip oiling line shall not exceed 1.7 lb/gal minus water and exempt compounds as determined by USEPA Method 24 analysis. [35 IAC 218.204(d)]
- c. No owner or operator of a coating line subject to the limitations of Section 218.204 of this Part is required to meet the limitations of Subpart G (Section 218.301 or 218.302) of this Part, after the date by which the coating line is required to meet Section 218.204 of this Part. [35 IAC 218.209]

7.5.2 Non-Applicability of Regulations of Concern

- a. The affected strip oiling process is not subject to 40 CFR 60, Subpart TT, because the source was in operation before the applicability date of the rule.

7.5.3 Control Requirements

N/A

7.5.4 Emission Limitations

In addition to Condition 5.2.2, the affected strip oiling process is subject to the following:

There are no specific emission limitations for this unit.

7.5.7 Operating Requirements

N/A

7.5.8 Inspection Requirements

N/A

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected strip oiling process, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain records of the following in accordance with 35 IAC 218.211(d).

Any owner or operator of a coating line subject to the limitations of Section 218.204 of this Subpart and complying by means of Section 218.205 of this Subpart shall comply with the following:

- i. By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance for an existing subject coating line from Section 218.204 or Section 218.207 of this Subpart to Section 218.205 of this Subpart; the owner or operator of the subject coating line shall certify to the Illinois EPA that the coating line will be in compliance with Section 218.205 of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date. Such certification shall include:
  1. The name and identification number of each coating line which will comply by means of Section 218.205 of this Subpart.
  2. The name and identification number of each coating as applied on each coating line.
  3. The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.

4. On and after March 15, 1998, for coating lines subject to the limitations of Section 218.204(1)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line.
5. The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each coating line.

6. The method by which the owner or operator will create and maintain records each day as required in subsection (d)(2) of this Section.
  7. An example of the format in which the records required in subsection (d)(2) of this Section will be kept.
- ii. On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:
1. The name and identification number of each coating as applied on each coating line.
  2. The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.
  3. On and after March 15, 1998, for coating lines subject to the limitations of Section 218.204(1)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied each day on each coating line.
  4. The daily-weighted average VOM content of all coatings as applied on each coating line as defined in Section 218.104 of this Part.
- iii. On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject coating line shall notify the Illinois EPA in the following instances:
1. Any record showing violation of Section 218.205 of this Subpart shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.

2. At least 30 calendar days before changing the method of compliance with this Subpart from Section 218.205 of this Subpart to Section 218.204 or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (c)(1) or (e)(1) of this Section, respectively. Upon changing the method of compliance with this subpart from Section 218.205 to Section 218.204 or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (c) or (e) of this Section, respectively.

b. The Permittee shall maintain records on the amount of coating oil used (gal/mo and gal/yr).

c. The Permittee shall maintain records on the VOM content of each oil used (lb/gal less water and exempt compounds).

#### 7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of an affected strip oiling process 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:

Notification within 30 days following the occurrence of a violation of the affected strip oiling process with the conditions of this section with a copy of such record for each incident.

#### 7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

#### 7.5.12 Compliance Procedures

a. Emission calculations shall be based on the recordkeeping requirements in Condition 7.5.9 and the formula listed below:

i. Emission Calculations from the Strip Oiling Process

- Emissions (tons) = [(oil usage (gal)) x (VOM content (lb VOM/gal oil))]/2000 lb/ton

- b. Compliance with Condition 7.5.1(b) is demonstrated by the manufacturers certification or independent laboratory analysis indicating that VOM content is less than or equal to 1.7 lb/gal minus water and exempt compounds.

7.6 Unit 06: Cold Rolling Mill Processes  
 Control 06: Baghouse

7.6.1 Description

After oiling, the steel strip is either shipped or sent to the cold mills for cold rolling. ISG Riverdale Inc. operates two cold reduction mills for processing of pickled and oiled hot band steel. In the cold reduction process, the steel strip is cold worked in the mill rolls to impart the necessary metallurgical properties to the steel strip. Rubber coated squeegee rollers from the pickling lines are ground to remove grooves from the surface of the roller. After grinding the rollers are reused in the pickling until enough of the rubber coating has been removed to require the rollers to be sent off site to be recoated.

7.6.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
06	- Cold Rolling Mill CR-21	N/A
	- Pickle Squeegee Roll Grinder	Baghouse

7.6.3 Applicability Provisions and Applicable Regulations

- a. The "affected cold rolling mill processes" for the purpose of these unit-specific conditions, are the processes listed in Condition 7.6.2.
- b. The affected cold rolling mill processes are subject to 35 IAC 212.322(c) which states:

Limits for Process Emission Units For Which  
 Construction or Modification Commenced Prior to  
 April 14, 1972

Metric		English	
P	E	P	E
Mg/hr	Kg/hr	T/hr	lbs/hr
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87
0.2	0.68	0.20	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.	8.7	10.00	19.20
13.	11.1	15.00	25.20
18.	13.8	20.00	30.50
23.	16.2	25.00	35.40
Metric		English	
P	E	P	E
Mg/hr	Kg/hr	T/hr	lbs/hr
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	27.5	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	67.50
454.0	31.3	500.00	69.00

Where:

P = Process weight rate in Mg/hr or T/hr, and  
E = Allowable emission rate in Kg/hr or lbs/hr.  
[35 IAC 212.322(c)]

- c. The affected cold rolling mill processes are subject to the emission limits identified in Condition 5.2.2.
- d. 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 Section 218.302, 218.303, 218.304 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 218.301]
- e. Emissions of PM<sub>10</sub> from the pickle squeegee roll grinder in building 60 shall not exceed 0.1 lb/hr.

#### 7.6.4 Non-Applicability of Regulations of Concern

N/A

7.6.5 Operational and Production Limits and Work Practices

N/A

7.6.6 Emission Limitations

In addition to Condition 5.2.2, the affected cold rolling mill processes are subject to the following:

There are no specific emission limitations for this unit.

7.6.7 Operating Requirements

None

7.6.8 Inspection Requirements

None

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected cold rolling mill processes, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain records of the amount of steel rolled (ton/mo and ton/yr).
- b. The Permittee shall maintain records of the following in accordance with 35 IAC 212.324(g).
  - i. Written records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment shall be kept in accordance with subsection (f) of this Section.
  - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made.

- iii. A written record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
  - iv. Copies of all records required by this Section shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.
  - v. The records required under this Section shall be kept and maintained for at least three (3) years and shall be available for inspection and copying by Illinois EPA representatives during working hours.
  - vi. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made. [35 IAC 212.324(g)]
- c. The Permittee shall maintain records of VOM containing material used (gal/mo and gal/yr).

#### 7.6.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of the affected cold rolling mill processes 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. Notification within 30 days following the occurrence of a violation of the affected cold rolling mill processes with the conditions of this section with a copy of such record for each incident.

#### 7.6.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

#### 7.6.12 Compliance Procedures

a. Emission calculations shall be based on the recordkeeping requirements in Condition 7.6.9 and the emission factors and formulas listed below:

i. Emission Calculations For Cold Rolling Mills

Emission Factor For Cold Rolling Mill

VOM (Lb/ton Rolled Steel)
0.560

Emission factor is referenced from AIRS, SCC 3-03-009-35

- Emissions (tons) = [(rolled steel (ton)) x (.560 (lb/ton rolled))]/2000 lb/ton

ii. Emission Calculations For Grinder Baghouse

Emission Factor For Grinder Baghouse

PM (gr/dscfm)	PM <sub>10</sub> (gr/dscfm)
0.001	0.001

- Emissions (tons) = [(2000 dscfm\*) x (appropriate emission factor (gr/dscfm))]/7000 gr/lb/2000 lb/ton

\* Baghouse exhaust flowrate is based on Engineering judgment.

7.7 Unit 07:: Fugitive Emissions  
 Control 07: None

7.7.1 Description

ISG Riverdale Inc. generates fugitive dust and VOM emissions from several processes at the facility. These processes are listed in the following table.

7.7.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
07	- Paved Roadways - Unpaved Roadways - Stockpiles - Storage Piles	Company or Contracted Dust Suppressant Application and Road Cleaning Equipment

7.7.3 Applicability Provisions and Applicable Regulations

- a. The "affected fugitive emission sources" for the purpose of these unit-specific conditions, is all emission Unit 10 sources listed in Condition 7.7.2.
- b. All normal traffic pattern access areas surrounding storage piles specified in Section 212.304 of this Subpart and all normal traffic pattern roads and parking facilities which are located on 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 this Subpart. [35 IAC 212.306]
- c. 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]
- d. 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]

- e. The affected fugitive particulate emission sources are subject to the emission limits identified in Condition 5.2.2.
- f. Emission Limitations for Roadways or Parking Areas. No person shall cause or allow fugitive particulate matter emissions from any roadway or parking area to exceed an opacity of 10 percent, except that the opacity shall not exceed 5 percent at quarries with a capacity to produce more than 1 million T/yr of aggregate. [35 IAC 212.316(c)]
- g. Emission Limitations for Storage Piles. No person shall cause or allow fugitive particulate matter emissions from any storage pile to exceed an opacity of 10 percent, to be measured four ft from the pile surface. [35 IAC 212.316(d)]
- h. Emission Limitation for All Other Emission Units. Unless an emission unit has been assigned a particulate matter, PM<sub>10</sub>, or fugitive particulate matter emissions limitation elsewhere in 35 IAC Section 212 or in Subparts R or S of this Part, no person shall cause or allow fugitive particulate matter emissions from any emission unit to exceed an opacity of 20 percent. [35 IAC 212.316(f)]
- i. The Permittee shall initiate and maintain the roadway control program listed in Condition 7.7.5 which shall be implemented during the period of April 1 to November 1 of each year to achieve at least an average particulate emissions reduction of 90% on both paved and unpaved roadways.
- j. 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 Section 218.302, 218.303, 218.304 of this Part and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material.

#### 7.7.4 Non-Applicability of Regulations of Concern

N/A

#### 7.7.5 Control Requirements

- a. The following road dust control programs are effective from April 1 through November 1 of the given year.
- b. On unpaved roads at the Riverdale facility, the Permittee shall carry out the following control measures:
  - i. The Permittee will apply a chemical dust suppressant at least weekly until a ground inventory of 0.21 gallons per square yard has been accumulated.
  - ii. After a ground inventory of 0.21 gallons per square yard has been accumulated, at least weekly the unpaved roads will be pressure watered, except that every fourth week a dilute suppressant solution will be applied in lieu of pressure watering.
- c. On paved roadways at the Riverdale facility the Permittee shall carry out the following control measures:
  - i. High traffic areas will be swept and, if appropriate, receive high pressure watering at least every other day.
  - ii. Medium traffic areas will be swept and, if appropriate, receive high pressure watering at least twice per week.
  - iii. For this purpose, unless other designations are approved by the Illinois EPA areas A, C, Q, and S and areas B, D, E, I, and N are considered high traffic and medium traffic areas, respectively.
- d. Notwithstanding the above, if the traffic on all or part of an area is substantially reduced on a particular day (e.g., receipts and shipments do not occur on Saturday or Sunday), control measures do not have to be implemented on the affected portion of the area on that day, provided that measures are implemented as needed to minimize wind-blown dust, required control measures are implemented on the next day that traffic resumes on the area, and reliance on this provision is identified in the records required in Condition 7.7.9.

7.7.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected fugitive emission sources are subject to the following:

- a. Combined fugitive emissions from the paved and unpaved roadways at the continuous caster/hot strip mill and BOF shop, shall not exceed the following:

TSP (lb/month)	TSP (ton/year)	PM <sub>10</sub> (lb/month)	PM <sub>10</sub> (ton/year)
14,221.66	85.33	2,853.33	17.12

The above limitations were established in Permit 93040047, 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].

7.7.7 Operating Requirements

N/A

7.7.8 Inspection Requirements

None

7.7.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected fugitive emission sources, pursuant to Section 39.5(7)(b) of the Act:

- a. Recordkeeping and Reporting
  - i. The owner or operator of any fugitive particulate matter emission unit subject to this Section shall keep written records of the application of control measures as may be needed for compliance with the opacity limitations of this Section and shall submit to the Illinois EPA an annual report containing a summary of such information.

- ii. The records required under this subsection shall include at least the following:
  - 1. The name and address of the source;
  - 2. The name and address of the owner and/or operator of the source;
  - 3. A map or diagram showing the location of all emission units controlled, including the location, identification, length, and width of roadways;
  - 4. For each application of water or chemical solution to roadways by truck: the name and location of the roadway controlled, application rate of each truck, frequency of each application, total quantity of water or chemical used for each application and, for each application of chemical solution, the concentration and identity of the chemical;
  - 5. For application of physical or chemical control agents: the name of the agent, application rate and frequency, and total quantity of agent, and, if diluted, percent of concentration, used each day; and
  - 6. A log recording incidents when control measures were not used and a statement of explanation.
- iii. Copies of all records required by this Section shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA and shall be transmitted to the Illinois EPA by a company-designated person with authority to release such records.
- iv. The records required under this Section shall be kept and maintained for at least three (3) years and shall be available for inspection and copying by Illinois EPA representatives during working hours.
- v. A quarterly report shall be submitted to the Illinois EPA stating the following: the dates any necessary control measures were not implemented, a listing of those control

measures, the reasons that the control measures were not implemented, and any corrective actions taken. This information includes, but is not limited to, those dates when controls were not applied based on a belief that application of such control measures would have been unreasonable given prevailing atmospheric conditions, which shall constitute a defense to the requirements of this Section. This report shall be submitted to the Illinois EPA thirty (30) calendar days from the end of a quarter. Quarters end March 31, June 30, September 30, and December 31.

- b. The Permittee shall maintain records on the amount of material loaded/unloaded (ton/mo and ton/yr), so that emissions may be calculated in accordance with Condition 7.7.12(a)(ii).
- c. The Permittee shall maintain records on the amount of material transferred between conveyers (ton/mo and ton/yr), so that emissions may be calculated in accordance with Condition 7.7.12(a)(iii).

#### 7.7.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of an affected fugitive emission source 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:

Notification within 30 days following the occurrence of a violation of the affected fugitive emission sources with the conditions of this section with a copy of such record for each incident.

- a. The emission units described in Sections 212.304 through 212.308 and Sections 212.316 of this Subpart shall be operated under the provisions of an operating program, consistent with the requirements set forth in Sections 212.310 and 212.312 of this Subpart, and prepared by the owner or operator 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]
- b. The owner or operator of any fugitive particulate matter emission unit subject to this Section shall keep written records of the application of control measures as may be needed for compliance with the opacity limitations of this Section and shall submit to the Illinois EPA an annual report containing a summary of such information. [35 IAC 212.316(g)(1)]

#### 7.7.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

#### 7.7.12 Compliance Procedures

- a. Emission calculations are based on the recordkeeping requirements in Condition 7.7.9 and the following emission factors and formulas.

- i. Particulate Emissions From Vehicle Traffic

##### Unpaved Roadways

$$E = k (5.9)(s/12)(S/30)(W/3)^{0.7}(w/4)^{0.5}(365-p/365)$$

Where

E = Emission factor (lb/VMT)

K = Particle size multiplier (0.8 for TSP,  
0.36 for PM<sub>10</sub>)

s = Silt content of road surface material (%)

S = Mean vehicle speed (mph)

W = Mean vehicle weight (tons)

w = Mean number of wheels

p = Number of days with at least 0.01 in. of precipitation per year (120 for Chicago, Illinois)

Industrial Paved Roadways

$$E = k (sL/2)^{0.65} (W/3)^{1.5}$$

Where

E = Emission factor (lb/VMT)

k = Particle size multiplier (0.82 for TSP, 0.016 for PM<sub>10</sub>)

sL = Road silt loading (g/m<sup>2</sup>)

W = Average weight (tons) of vehicles traveling the road

The table below tabulates the various calculated emission factors by utilizing the above equations with substituted constants for the various paved roadway segments for the location at ISG Riverdale Inc.. Additionally, average vehicle miles traveled on those segments, and PM<sub>10</sub> and TSP emissions are also included. All emissions are based on a 90% control efficiency from the roadway control program. The Permittee may use the actual vehicle miles traveled shown in the table as a baseline and adjust the mileage in proportion to the production of the baseline to the current year production in lieu of actual recordkeeping of vehicle miles traveled.

Location/ Segment	PM <sub>10</sub> Emission Factor (lb/VMT)	TSP Emission Factor (lb/VMT)	Average Vehicle Miles (mi/yr)	PM <sub>10</sub> Emissions (ton/yr)	TSP Emissions (ton/yr)
Riverdale/ A-Truck	0.12	0.62	23,886.35	1.46	7.26
Riverdale/ A-Cars	0.00	0.02	5,416.09	0.01	0.05
Riverdale/ B-Truck	0.10	0.50	91,160.66	4.46	22.87
Riverdale/ B-Cars	0.00	0.01	26,441.63	0.04	0.19

Location/ Segment	PM <sub>10</sub> Emission Factor (lb/VMT)	TSP Emission Factor (lb/VMT)	Average Vehicle Miles (mi/yr)	PM <sub>10</sub> Emissions (ton/yr)	TSP Emissions (ton/yr)
Riverdale/ C-Truck	0.51	2.63	26,141.66	6.71	34.39
Riverdale/ C-Cars	0.01	0.07	2,455.29	0.02	0.09
Riverdale/ D-Truck	0.23	1.15	11,760.23	1.32	6.78
Riverdale/ D-Cars	0.01	0.03	428.10	0.00	0.01
Riverdale/ E-Truck	0.07	0.36	43,995.32	1.55	7.72
Riverdale/ E-Cars	0.00	0.01	26.38	0.00	0.00
Riverdale/ H-Truck	0.73	3.74	15,013.96	5.48	28.09
Riverdale/ H-Cars	0.02	0.11	257.55	0.00	0.01
Riverdale/ I-Truck	0.38	1.97	8,409.10	1.62	8.28
Riverdale/ I-Cars	0.01	0.06	257.55	0.00	0.01
Riverdale/ N-Truck	0.29	1.50	3,021.90	0.44	2.27
Riverdale/ N-Cars	0.01	0.04	355.52	0.00	0.01
Riverdale/ O-Truck	0.35	1.81	74,206.91	13.11	67.17
Riverdale/ O-Cars	0.01	0.05	100,322.6	0.50	2.57
Riverdale/ P-Truck	0.35	1.81	65,578.20	11.58	59.36
Riverdale/ P-Cars	0.01	0.05	7,036.29	0.04	0.18
Riverdale/ U-Cars	0.01	0.05	21,931.00	0.11	0.56
Uncontrolle d				48.44	248.26
Total Controlled				4.84	24.83

The table below tabulates the various calculated emission factors from the above equations with substituted constants for the various unpaved roadway segments for the locations at ISG Riverdale Inc. Additionally, average vehicle miles traveled on those segments, and PM<sub>10</sub> and TSP emissions are also included. All emissions are based on a 90% control efficiency from the roadway control program. The Permittee may use the actual vehicle miles traveled shown in the table as a baseline and adjust the mileage in proportion

to the production of the baseline to the current year production in lieu of actual recordkeeping of vehicle miles traveled.

Location/ Segment	PM <sub>10</sub> Emission Factor (lb/VMT)	TSP Emission Factor (lb/VMT)	Average Vehicle Miles (mi/yr)	PM <sub>10</sub> Emission s (ton/yr)	TSP Emissions (ton/yr)
Riverdale/ F-Truck	3.09	6.88	12,720.87	19.68	43.73
Riverdale/ F-Cars	0.24	0.53	2,888.58	0.35	0.77
Riverdale/ G-Truck	3.09	6.88	7,465.87	11.55	25.67
Riverdale/ G-Cars	0.24	0.53	474.02	0.06	0.13
Riverdale/ J-Truck	3.09	6.88	3,136.70	4.85	10.78
Riverdale/ J-Cars	0.24	0.53	325.89	0.04	0.09
Riverdale/ K-Truck	3.09	6.88	548.83	0.85	1.89
Riverdale/ K-Cars	0.24	0.53	112.58	0.01	0.03
Riverdale/ L-Truck	3.09	6.88	2,346.42	3.63	8.07
Riverdale/ L-Cars	0.24	0.53	195.53	0.02	0.05
Riverdale/ M-Truck	3.09	6.88	1,296.16	2.01	4.46
Riverdale/ M-Cars	0.24	0.53	82.95	0.01	0.02
Uncontrolle d				43.05	95.68
Total Controlled				4.31	9.57

ii. Particulate Emission Calculations From Material Loading and Unloading

$$E = (0.0032) \frac{(U / 5)^{1.3}}{(M / 2)^{1.2}}$$

Where:

E = Emission factor, lb/ton

k = Particle size multiplier (0.74 for TSP, 0.35 for PM<sub>10</sub>)

U = Mean wind speed, mph (10.3 mph for Chicago, IL)

M = Material moisture content, %

iii. Particulate Emission Calculations For Material Transfer Between Conveyers

TSP Emission Factor (lb/ton)	PM <sub>10</sub> Emission Factor (lb/ton)
$1.4 \times 10^{-4}$	$4.8 \times 10^{-5}$

- Particulate Emissions (tons) = [(material transferred (tons)) x (appropriate emission factor (lb/ton))]/2000 lb/ton

The above emission factors are referenced from AP-42, Table 11.19.2-2.

## 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 November 1, 2000 (the date of issuance of the draft 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. 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 Condition 8.6.

## 8.6 Reporting Requirements

### 8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
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 determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which 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. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
  - i. Illinois EPA - Air Compliance Section  
  
Illinois Environmental Protection Agency  
Bureau of Air  
Compliance Section (MC 40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276
  - ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

- iii. Illinois EPA - Air Permit Section (MC 11)

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

- iv. USEPA Region 5 - Air Branch

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

- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

#### 8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

## 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 [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- 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, 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, 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 such malfunction or breakdown is allowed by a permit condition [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 thereunder.

#### 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, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

- 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
  - 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 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. As 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 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, Compliance 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 Section, 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 [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment 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:
  - 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. Normally, an act of God such as lightning or flood is considered an emergency;
  - 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.

#### 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, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, 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 inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

#### 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 under Section 39.5(15)(b) 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, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. 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

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(l), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 Summary of Process Weight Rate  
35 IAC 212.321

Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:  
Emissions Equation

Where:

P = Process weight rate; and

E = Allowable emission rate; and,

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

	Metric	English
P	Mg/hr	T/hr
E	Kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

- 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	lbs/hr
A	11.42	24.8
B	0.16	0.16

Limits for Process Emission Units For Which Construction or Modification Commenced On or After April 14, 1972

Metric		English	
P	E	P	E
Mg/hr	Kg/hr	T/hr	lbs/hr
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.20	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	5.15
4.5	2.7	5.00	6.00
9.	3.9	10.00	8.70
13.	4.8	15.00	10.80
18.	5.7	20.00	12.50
23.	6.5	25.00	14.00
27.	7.1	30.00	15.60
Metric		English	
P	E	P	E
Mg/hr	Kg/hr	T/hr	lbs/hr
32.	7.5	35.00	17.00
36.	8.2	40.00	18.20
41.	8.8	45.00	19.20
45.	9.3	50.00	20.50
90.	13.4	100.00	29.50
140.	17.0	150.00	37.00
180.	19.4	200.00	43.00
230.	22.	250.00	48.50
270.	24.	300.00	53.00
320.	26.	350.00	58.00
360.	28.	400.00	62.00
408.	30.1	450.00	66.00
454.	30.4	500.00	67.00

10.2 Attachment 2 - 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: \_\_\_\_\_

10.3 Attachment 3 - Preliminary Baseline Emission Summary

**ATTACHMENT 3**

BASELINE EMISSIONS SUMMARY

Seasonal VOM emissions from excluded units, in tons/season (TPS):

<u>Emission Unit</u>	<u>Proposed</u>	<u>Illinois EPA Determination</u>	<u>Notes</u>
#5 Boiler	0.0290	0.0290	
#6 Boiler	0.0340	0.0340	
#7 Boiler	0.2170	0.2170	
#8 Boiler	0.0000	0.0000	
Fuel Oil Consumption by Fuel Combustion Emission Units	0.0000	0.0000	
Ladle Preheating	0.1130	0.1130	3
Ladle Drying	0.0470	0.0470	3
Tundish Drying/Preheating/Misc. Heating	0.1150	0.1150	3
Tunnel Furnace	<u>0.1600</u>	<u>0.1600</u>	3
Total:	0.715	0.715	

Seasonal VOM emissions from units subject to further reduction, in TPS:

<u>Emission Unit</u>	<u>Proposed</u>	<u>Illinois EPA Determination</u>	<u>Notes</u>
Ingot Soaking Pits	0.5000	0.5000	3
#4 Hot Strip Mill Reheat Furnace	0.3550	0.3550	3
Annealing	0.0480	0.0000	3, 4
Riverdale Solvent Degreaser	3.4370	0.0000	3, 4
Hot Metal Transfer	0.0080	0.0080	
Hot Metal Slag Skimming	0.0003	0.0003	
BOF Charging	0.0540	0.0540	
BOF Blow Process	0.0010	0.0010	
BOF Tapping	0.0540	0.0540	
BOF Slag Tap and Dump	0.0330	0.0330	
BOF Electrostatic Precipitator (Stack Emissions	2.9510	2.9510	
CSP Hot Strip Mill	4.1700	4.1700	
Ingot Teeming	0.3590	0.3590	
Primary Hot Rolling	13.4760	13.4760	
#4 Hot Strip Mill Rolling	11.1930	11.1930	
Cold Rolling CR-21	2.0180	2.1080	
Cold Rolling CR-22	<u>0.0000</u>	<u>0.0000</u>	
Total:	38.6573	35.2623	

- Notes:
1. These emission units are excluded from further reduction because these activities fall under the definition of an affected facility pursuant to a MACT based NESHAP of Part 63 although there are no requirements or standards for these activities pursuant to the rule.
  2. Actual emissions from these emission units are excluded from further reduction. Emissions that result from an adjustment to the baseline for voluntary overcompliance are subject to a 12% reduction.
  3. These emission units do NOT meet the criteria necessary to qualify for BAT.
  4. Treated as insignificant activities in the Title V permit, hence excluded from the baseline pursuant to 35 IAC 205.220.

The source shall maintain records of actual seasonal VOM emissions for all emission units not considered insignificant activities in accordance with the recordkeeping and compliance procedures identified in the CAAPP permit starting with the 1998 seasonal allotment period of May 1 through September 30. The source shall submit the seasonal emissions information, as a component of the Annual Emissions Report by November 30 of each year, pursuant to 35 IAC 205.300.

$$\text{TOTAL SOURCE ALLOTMENT} = 0.715 + (0.88 \times 35.2623) = 31.7458 \text{ TPS}$$

OR 317 ATU

1 ATU equals 200 lbs of VOM [35 IAC 205.130], or using standard conversion rate of 2000 lbs per ton, 10 ATUs equals 1 ton.