

FINAL DRAFT/PROPOSED CAAPP PERMIT  
ASF - Keystone, Inc.  
I.D. No.: 119040AAC  
Application No.: 96030102  
October 7, 2003

217/782-2113

TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT  
and  
TITLE I PERMIT<sup>1</sup>

PERMITTEE

ASF - Keystone, Inc.  
Attn: Doug Stracke, Environmental Engineer  
1700 Walnut Street  
Granite City, Illinois 62040

<u>Application No.:</u> 96030102	<u>I.D. No.:</u> 119040AAC
<u>Applicant's Designation:</u>	<u>Date Received:</u> March 7, 1996
<u>Operation of:</u> Steel Foundry	
<u>Date Issued:</u> TO BE DETERMINED	<u>Expiration Date</u> <sup>2</sup> : TO BE DETERMINED
<u>Source Location:</u> 1700 Walnut Street, Granite City, Madison County	
<u>Responsible Official:</u> John Worries, President	

This permit is hereby granted to the above-designated Permittee to OPERATE a steel foundry, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

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

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:JS:psj

cc: Illinois EPA, FOS, Region 3  
CES  
Lotus Notes

1 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.

2 Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

AFS - Keystone, Inc.  
1700 Walnut Street  
Granite City, Illinois 62040  
618/452-2111

I.D. No.: 119040AAC  
Standard Industrial Classification: 3325, Steel Foundries

1.2 Owner/Parent Company

ASF - Keystone, Inc.  
1700 Walnut Street  
Granite City, Illinois 62040

1.3 Operator

AFS - Keystone, Inc.  
1700 Walnut Street  
Granite City, Illinois 62040

Doug Stracke  
618/452-2111

1.4 General Source Description

AFS - Keystone, Inc. is located at 1700 Walnut Street in Granite City, Illinois. The source is a steel foundry, primarily engaged in the production of side frames and bolsters for rail cars.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
ERMS	Emissions Reduction Market System
FIRE	Factor Information Retrieval System, Versions 5.0 and 6.21, Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants (EPA-454/R-95-012 and EPA-454/F-99-003), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27717
ft	feet
ft <sup>3</sup>	cubic feet
gal	gallon
HAP	Hazardous Air Pollutant
hr	hour
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
kg	kilogram
kW	kilowatts
lb	pound
m	meter
mmBtu	Million British thermal units
MW	megawatts
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
ppm	parts per million
PSD	Prevention of Significant Deterioration
RMP	Risk Management Plan
SCC	Source Classification Code

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SO <sub>2</sub>	Sulfur Dioxide
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOM	Volatile Organic Material
wt. %	weight percent

### 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:

Personnel Building Boiler No. 1 (5.1 mmBtu/hr)  
Personnel Building Boiler No. 2 (5.8 mmBtu/hr)  
Core Wash Drying Oven (CWD-1)  
Arc Air Welding Stations

- 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:

Core Wash Spray Booth and Dip Tanks  
Sodium Silicate Tank

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

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

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

Storage tanks of any size containing virgin or re-refined distillate oil, hydrocarbon condensate from

natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].

- 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.

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

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
<b>Core Sand System</b>			
Pep Set	Polyurethane (No-Bake) Core Resin Machines	1/2000	None
ICM-1	Polyurethane (Cold Box) Core Resin Machine No. 1 (3.2 mmBtu/hr)	1/1996	Scrubber (ICM-SCB)
ICM-2	Polyurethane (Cold Box) Core Resin Machine No. 6 (4.4 mmBtu/hr)	1/1996	Scrubber (ICM-SCB)
CB-1	Ester Cured Phenolic Coldbox Core Machine	12/1993	None
SCM-1	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-23)	4/1959	None
SCM-2	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-26)	4/1960	None
SCM-3	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-47)	9/1977	None
SCM-4	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-32)	10/1971	None
SCM-5	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-37)	5/1975	None
SCM-6	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-49)	5/1980	None
PANB	Phenolic/Acid No-Bake Core Resin Machine	3/1957	None
CS-1	Core Sand System	2/1969	Baghouse (CS-BH-1)
KD-1	Sand Dryer (6.1 mmBtu/hr)	12/1954	Cyclone (KD-DC-1)
KC-1	Sand Cooler	11/1981	Cyclone (KC-DC-1)
CR-1	Chromite Reclamation	6/1974	Cyclone (CR-DC-1)
<b>Molding Sand System</b>			
MSS-1	No. 1 Molding Floor	6/1994	Baghouse (MSS-BH-1)
MSS-3	No. 3 Molding Floor	Prior to June 1968	Baghouse (MSS-BH-3)
MSS-6	No. 6 Molding Floor	5/1981	Dust Collector (MSS-BH-6)
MSSP	Mold Spraying	3/1990	None
SK-KO-1	Skid Shakeout	12/1980	Dust Collector (RC-SO-BH-1)

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Emission Unit	Description	Date Constructed	Emission Control Equipment
KO-1	Casting Knockout	7/1994	Baghouse (KO-BH-1)
<b>Metal Processing</b>			
EF-1	Electric Arc Furnace No. 1	6/1968	Dust Collector (EF-BH-1)
EF-2	Electric Arc Furnace No. 2	6/1968	Dust Collector (EF-BH-2)
PR/CST-1	Pouring and Casting		None
<b>Casting and Finishing</b>			
SB-5	No. 5 Shot Blast Machine	7/1994	Dust Collector (SB-BH-5)
SB-6	No. 6 Shot Blast Machine	1/1976	Dust Collector (SB-BH-6)
SB-7	No. 7 Shot Blast Machine	1/1979	Dust Collector (SB-BH-7)
TB-1	Tumble Blast Machine	4/1995	Dust Collector Baghouse (TB-BH-1)
TB-2	Tumble Blast Machine	6/1998	Baghouse (TB-BH-2)
CP-1	Casting Paint Booth	7/1981	Water Wash Filter
<b>Natural Gas Combustion Sources</b>			
TO-2	Tower Oven (5.5 mmBtu/hr)	5/1982	None
LDP-1	Ladle Preheater (9.0 mmBtu/hr)	11/1979	None
HT-17	Heat Treating Furnace No. 17 (10 mmBtu/hr)	6/1941	None
HT-33	Heat Treating Furnace No. 33 (10 mmBtu/hr)	6/1941	None
HT-13	Heat Treating Furnace No. 13 (30 mmBtu/hr)	1/1941	None
HT-14	Heat Treating Furnace No. 14 (30 mmBtu/hr)	8/1941	None
HT-35	Heat Treating Furnace No. 35 (11 mmBtu/hr)	9/1974	None
LPCP-1	Low Profile Center Plate Line Finishing (5.86 mmBtu/hr)	3/1996	None

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 VOM, PM<sub>10</sub>, and CO emissions.

5.1.2 This permit is issued based on the source not being a major source of HAPs.

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. 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.
- c. PM emission limits for process emission units located in Granite City:
  - i. No person shall cause or allow fugitive particulate matter emissions from any roadway or parking area to exceed an opacity of 10 percent. [35 IAC 212.316(c)].
  - ii. Unless an emission unit has been assigned a particulate matter, PM<sub>10</sub>, or fugitive particulate matter emissions limitation elsewhere in 35 IAC 212.316 or in 35 IAC 212

Subpart R or S, 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)].

- iii. No person shall cause or allow the emission into the atmosphere, of PM<sub>10</sub> from any process emission unit to exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period. This mass emission limit shall not apply to those emission units with no visible emissions other than fugitive particulate matter. This emission limitation is not applicable to any emission unit subject to a specific emissions standard or limitation contained in 35 IAC 212, Subpart R (see Condition 5.2.2(c) (iv) below) [35 IAC 212.324(a) (3), (b), and (d)].
- iv. 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:
  - A. 0.05 kg/Mg of sand processed from molding sand forming systems [35 IAC 212.458(b) (14)];
  - B. 0.01 kg/Mg (0.02 lb/ton) of sand processed from recycle sand shakeouts [35 IAC 212.458(b) (15)];
  - C. 20 percent opacity for all emission units [35 IAC 212.458(b) (16) (A)]; and
  - D. 22.9 mg/scm (0.01 gr/scf) for all other process emission units, except the sand dryer, sand cooler, chill tumbler, paint booth, chromite reclamation and core baking ovens, electric arc shop roof ventilators, molding sand forming systems, and recycle sand shakeouts [35 IAC 212.458(b) (16) (B)].

#### 5.2.3 Fugitive Particulate Matter Operating Program

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

- b. The operating program shall be amended from time to time by the Permittee so that the operating program is current. Such amendments shall be consistent with the requirements set forth by this Condition and shall be submitted to the Illinois EPA [35 IAC 212.312].
- c. All normal traffic pattern roads and parking facilities located at this source shall be paved or treated with water, oils, or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils, or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program [35 IAC 212.306].

#### 5.2.4 Ozone Depleting Substances

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

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

#### 5.2.5 Risk Management Plan

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.
- 5.2.6
- 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.
- 5.2.7 Episode Action Plan
- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, 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.

#### 5.2.8 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.

#### 5.2.9 CAM Plan

This stationary source has a pollutant-specific emissions unit that is subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources. The source must submit a CAM plan for each affected pollutant-specific emissions unit upon application for renewal of the initial CAAPP permit, or upon a significant modification to the CAAPP permit for the construction or modification of a large pollutant-specific emissions unit which has the potential post-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

### 5.3 Non-Applicability of Regulations of Concern

- 5.3.1 This permit is issued based on the source not being subject to 40 CFR Part 63, Subpart FFFFF, Integrated Iron and Steel, because this source is not engaged in the

production of steel from iron ore and is not a major source of HAP emissions. This source uses scrap iron in steel production.

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:

- 5.4.1 For any process emission unit subject to Condition 5.2.2(c), 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 35 IAC 212.324 and 212.458 shall be met at all times. Proper maintenance shall include the following minimum requirements [35 IAC 212.324(f)]:
- a. Visual inspections of air pollution control equipment;
  - b. Maintenance of an adequate inventory of spare parts; and
  - c. Expeditious repairs, unless the emission unit is shutdown.

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)	315.29
Sulfur Dioxide (SO <sub>2</sub> )	26.70
Particulate Matter (PM)	527.94
Nitrogen Oxides (NO <sub>x</sub> )	66.60
HAP, not included in VOM or PM	---
Total	936.53

5.5.2 Emissions of Hazardous Air Pollutants

This permit is issued based on the emissions of HAPs as listed in Section 112(b) of the CAA not being equal to or exceeding 10 tons per year of a single HAP or 25 tons per year of any combination of such HAPs, so that this source is considered a minor source for 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 to demonstrate compliance with Condition 5.5.1, 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 General Records for Fugitive Control, Maintenance, and Repair

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.2.2(c):

- a. Written records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment shall be kept in accordance with Condition 5.4.1 [35 IAC 212.324(g)(1)].
- b. 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 emission 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 [35 IAC 212.324(g) (2)].

- c. A written record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated [35 IAC 212.324(g) (3)].
- d. The owner or operator of any fugitive particulate matter emission unit subject to Condition 5.2.2(c) (i) or (ii) shall keep written records of the application of control measures as may be needed for compliance with the opacity limitations of Condition 5.2.2(c) (i) or (ii). These records shall include at least the following [35 IAC 212.316(g) (1) and (2)].
  - i. The name and address of the source;
  - ii. The name and address of the owner and/or operator of the source;
  - iii. A map or diagram showing the location of all emission units controlled, including the location, identification, length, and width of roadways;
  - iv. 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, width of each application, identification of each truck used, total quantity of water or chemical used for each application and, for each application of chemical solution, the concentration and identity of the chemical;
  - v. 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
  - vi. A log recording incidents when control measures were not used and a statement of explanation.

5.6.3 Records for Operating Scenarios

N/A

5.6.4 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.
- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

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

5.7.3 General Reporting for Fugitive Control, Maintenance, and Repair

- a. Copies of all records required by Condition 5.6.2 shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA [35 IAC 212.316(g) (3) and 212.324(g) (3)].

- b. 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) (5)].
- c. The owner or operator of any fugitive particulate matter emission unit subject to Condition 5.2.2(c) (i) or (ii) shall submit to the Illinois EPA an annual report containing a summary of the information listed in Condition 5.6.2(d) [35 IAC 212.316(g) (1)].
- d. 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 reason 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 Condition 5.2.2(c). 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) (5)].

5.8 General Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility and anticipated operating scenarios are provided in Section 7 (Unit Specific Conditions) as necessary.

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and compliance procedures in Section 7 (Unit Specific Conditions) of this permit.

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- a. For the purpose of estimating NO<sub>x</sub>, SO<sub>2</sub>, PM, and VOM emissions from natural gas combustion, the emission factors found in the current version of AP-42, Section 1.4, are acceptable.
- b. For the purpose of estimating NO<sub>x</sub>, SO<sub>2</sub>, PM, and VOM emissions from steel foundry operations, the emission factors found in the following are acceptable:
  - i. Current version of AP-42, Section 12.13;
  - ii. AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, March, 1990;
  - iii. FIRE Version 5.0, Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, August, 1995 (or a more recent version of FIRE); and
  - iv. Applicable equations as reflected in Section 7 (Unit Specific Conditions).
- c. For the purpose of estimating fugitive PM emissions from unpaved roads and storage piles at the source, the emission factors and calculation procedures found in the current version of AP-42, Section 13.2, are acceptable.

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6.0 NOT APPLICABLE TO THIS PERMIT

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit - Core Sand System  
 Control - Scrubber, Baghouse, Cyclone

7.1.1 Description

Sand for making cores supplied for molding are either new sand or recycled sand generated from within the source. New sand is delivered into the core room storage tanks via pneumatic transport from trucks or railcars. The transfer of sand from the core room sand storage tanks is performed by mechanical batch transfer to sand muller or by pneumatic transport to the polyurethane no-bake core machines (Pep Set). The Pet Set machines have designated bin vents for the control of PM emissions.

VOM emissions from all core resin types (except polyurethane cold box core resin machines) are emitted to the indoor environment and are uncontrolled. Cores are then washed with a non-VOM containing core wash and dried in an oven.

All hot box (low phenolic) no-bake core sand supplied to the source is pre-prepared sand which is gravity fed into heated core boxes (SCM).

The supply of core sand to the polyurethane cold box core resin machines (ICM-1 and ICM-2) is via railcar and pneumatic transport to the individual machines. Recycled sand is generated within the sand dryer, cooler, and reclamation (KC-1, KD-1, and CR-1). The sand transport is controlled for PM emissions with bin vents. VOM emissions from ICM-1 and ICM-2 are controlled with a reverse flow acid scrubber.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Pep Set	Polyurethane (No-Bake) Core Resin Machines	None
ICM-1	Polyurethane (Cold Box) Core Resin Machine No. 1 (3.2 mmBtu/hr)	Scrubber (ICM-SCB)
ICM-2	Polyurethane (Cold Box) Core Resin Machine No. 6 (4.4 mmBtu/hr)	Scrubber (ICM-SCB)

Emission Unit	Description	Emission Control Equipment
CB-1	Ester Cured Phenolic Coldbox Core Machine	None
SCM-1	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-23)	None
SCM-2	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-26)	None
SCM-3	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-47)	None
SCM-4	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-32)	None
SCM-5	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-37)	None
SCM-6	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-49)	None
PANB	Phenolic/Acid No-Bake Core Resin Machine	None
CS-1	Core Sand System	Baghouse (CS-BH-1)
KD-1	Sand Dryer (6.1 mmBtu/hr)	Cyclone (KD-DC-1)
KC-1	Sand Cooler	Cyclone (KC-DC-1)
CR-1	Chromite Reclamation	Cyclone (CR-DC-1)

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected core sand system equipment" for the purpose of these unit-specific conditions, includes the emission units described in Conditions 7.1.1 and 7.1.2.
- b. The affected core sand system equipment is subject to 35 IAC 212.123 which provides that:
  - i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122 [35 IAC 212.123(a)].
  - ii. The 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(b)].

- c. 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].
- d. The affected core sand system equipment is subject to 35 IAC 212.321(b) or 212.322(b), which provides that:
  - i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (see also Attachment 1) [35 IAC 212.321(a)].
  - ii. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced prior to April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 1) [35 IAC 212.322(a)].
- e. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm [35 IAC 214.301].

- f. The affected core sand system equipment is subject to 35 IAC 219 Subpart G, Use of Organic Material, which provides that:
  - i. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in Condition 7.1.3(f)(ii) (see also 35 IAC 219.302) and the following exception: If no odor nuisance exists the limitation of this Condition shall apply only to photochemically reactive material [35 IAC 219.301].
  - ii. Emissions of organic material in excess of those permitted by Condition 7.1.3(f)(i) (see also 35 IAC 219.301) are allowable if such emissions are controlled by a vapor recovery system which absorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere. [35 IAC 219.302(b)].
- g. The affected core sand system equipment is subject to the emission limits identified in Condition 5.2.2.

7.1.4 Non-Applicability of Regulations of Concern

- a. The fuel burning portion of the affected core sand system equipment is not subject to 35 IAC Part 217, Subparts B and C, Nitrogen Oxide Emissions from New and Existing Fuel Combustion Emission Sources, because none of the equipment is by definition a fuel combustion emission unit.
- b. The fuel burning portions of the affected core sand system equipment is not subject to 35 IAC Part 216, Subpart B, Carbon Monoxide Emissions from Fuel Combustion Emission Units, because none of the equipment is by definition a fuel combustion emission unit.
- c. This permit is issued based on the affected core sand system equipment not being subject to 35 IAC 219 Subpart TT, because the control requirements in Subpart TT shall apply to iron and steel production [35 IAC 219.980(e)].

7.1.5 Operational And Production Limits And Work Practices

- a. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.
- b. The Sand Cooler (KC-1) shall be limited to a maximum operating rate of 141,715 lb/hr. This limit was established in Permit C906040.
- c. Usage of resin in the Polyurethane (No-Bake) Core Resin Machines (Pet Set) shall not exceed 418.8 tons per year. This limit was established in Permit 03020018

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected core sand system equipment is subject to the following:

- a. Emissions from the listed emission units shall not exceed the following limits:

<u>Equipment</u>	<u>Pollutant</u>	<u>Emissions</u>	
		<u>(Lb/Hour)</u>	<u>(Ton/Year)</u>
KC-1	PM	3.24	11.66
CB-1	VOM	18.9	37.8
ICM-1	VOM	--	10.49
ICM-6	VOM	--	21.40

These limits are based on the maximum emission rates and maximum hours of operation.

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 Permits C906040, 93110017, and 94120015, pursuant to 35 IAC Part 203 or 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 35 IAC Part 203 or 40 CFR 52.21 [T1].

- b. Emissions from the Polyurethane (No-Bake) Core Resin Machines shall not exceed the following limits:

<u>Equipment</u>	<u>Pollutant</u>	<u>Emissions</u>	
		<u>(Ton/Month)</u>	<u>(Ton/Year)</u>
Pep Set	VOM	3.0	24.5
Pep Set	single HAP	--	<10
Pep Set	all HAPs	--	<25

These limits are based on the maximum emission rates and maximum hours of operation.

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 03020018 pursuant to 35 IAC Part 203 or 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 35 IAC Part 203 or 40 CFR 52.21 [T1].

7.1.7 Testing Requirements

None

7.1.8 Monitoring 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 core sand system equipment to demonstrate compliance with Conditions 5.5.1, 7.1.3, 7.1.5, and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Sand, resin, and Betacure 100 throughput or usage (tons/month and tons/year);
- b. Monthly and annual natural gas usage in ICM-1, ICM-2, and KD-1 (ft<sup>3</sup>/month and ft<sup>3</sup>/year);
- c. Emissions of PM, SO<sub>2</sub>, NO<sub>x</sub>, and VOM (lb/hour, tons/month, and tons/year); and
- d. Records of inspection, maintenance, and repair activities for all equipment shall be kept on site and shall include as a minimum:
  - i. Date of inspection, maintenance, and repair activities.
  - ii. Description of maintenance or repair activity if not routine preventative maintenance.
  - iii. Reason for maintenance or repair if not routine or preventative.

#### 7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected core sand system equipment 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. If there is a deviation from the requirements of Conditions 7.1.5 or 7.1.6 as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

#### 7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected core sand system equipment without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly

obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

- a. The Permittee is authorized to use different resins with respect to the core machines.

7.1.12 Compliance Procedures

- a. Compliance with the requirements of Condition 7.1.3 is addressed by the operational limits and recordkeeping required by Conditions 7.1.5 and 7.1.9.
- b. Compliance with the emission limits in Conditions 5.5.1 and 7.1.6 shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission factors and formulas listed below:

- i. Emission factors for natural gas combustion:

<u>Pollutant</u>	<u>Emission Factor (lb/10<sup>6</sup> ft<sup>3</sup>)</u>
PM	7.6
SO <sub>2</sub>	0.6
VOM	5.5
NO <sub>x</sub>	100.0

These are the emission factors for uncontrolled natural gas combustion in small boilers (< 100 mmBtu/hr), Tables 1.4-1 and 1.4-2, AP-42, Volume I, Supplement F, March 1998.

Fuel combustion emissions (ton/year) = Natural Gas Consumed (10<sup>6</sup> ft<sup>3</sup>/year) x The Appropriate Emission Factor (lb/10<sup>6</sup> ft<sup>3</sup>) x (0.0005 ton/lb)

- ii. Emission factors for the core machines:

Emission Unit	VOM Emission Factor (lb/lb resin)	Emission Factor Source
Pep Set	0.0585	1997 Emissions Study (Ohio Cast Metal Assoc.); maximum 2% resin in sand/resin mixture and 2.34 lb VOM/ton mixture
ICM-1, 2	0.03575	chemical product information

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Emission Unit	VOM Emission Factor (lb/lb resin)	Emission Factor Source
CB-1	0.23	chemical product information
PANB	0.033	chemical product information

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/lb)} \times \text{Resin Usage (ton)} \times (2000 \text{ lb/ton})$$

- iii. Emission factors for hot box (low phenolic) no-bake core machines:

Pollutant	Emission Factor (lb/ton sand)	Emission Factor Source
VOM	2.43	"Calculating Emission Factors for Pouring, Cooling & Shakeout" (Modern Casting, October, 1994)

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/lb)} \times \text{Sand Processed (ton)}$$

- iv. Emission factors for the core sand system, sand dryer, sand cooler, and chromite reclamation:

Pollutant	PM Emission Factor (lb/ton sand processed)	Emission Factor Source
PM	3.6	assume PM <sub>10</sub> is 15% of PM
PM <sub>10</sub>	0.54	FIRE: SCC 3-04-007-06

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/ton)} \times \text{Sand Processed (ton)} \times [1 - \eta_{\text{Capture}} \times \eta_{\text{Control}}]$$

where:

$$\eta_{\text{Capture}} = \text{Capture Efficiency}/100\%$$

$$\eta_{\text{Control}} = \text{Control Efficiency}/100\%$$

(Efficiency as specified by manufacturers or vendors of the control devices or the most recent emissions tests)

7.2 Unit - Molding Sand System  
 Control - Dust Collectors

7.2.1 Description

There are three molding floors (MSS-1, 3, and 6) which are used in producing green sand molds. The steel generated by furnace production (Section 7.3) is poured from an overhead crane into the finished molds to create castings (Section 7.4). Each molding floor includes muller tanks, sand screening, conveying, cooling, and mold shakeout. The green sand for molding contains only sand, bentonite clay, and water. New sand and bentonite are added to each floor as replacement sand is required.

PM emissions from the mold forming activities on each molding floor are captured and controlled by emission control equipment. Emissions from mold forming activities are mostly within the building enclosures.

The cope and drag molds created on the molding floors are sprayed with a light coating of zircon and silica which helps prevent steel penetration into molds. Once the molds are sprayed, the molds are assembled to create the finished mold prior to casting.

After the castings are poured and allowed to cool and harden (Section 7.4), they are separated from the molds on the molding floors. The remaining molding sands in the flasks are shaken out on the associated floor.

The castings are placed on skids and taken to skid shakeout/railcar sand handling (RC-SO-1) where mechanical shakeout removes molding sands from the castings. The individual castings are manually placed onto a conveyor and taken to casting knockout (KO-1) where more aggressive mechanical shaking of the castings removes any further sands.

7.2.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
MSS-1	No. 1 Molding Floor	Baghouse (MSS-BH-1)
MSS-3	No. 3 Molding Floor	Baghouse (MSS-BH-3)
MSS-6	No. 6 Molding Floor	Dust Collector (MSS-BH-6)
MSSP	Mold Spraying	None

Emission Unit	Description	Emission Control Equipment
RC-SO-1	Skid Shakeout/Railcar Sand Handling System	Dust Collector (RC-SO-BH-1)
KO-1	Knockout Sand System	Baghouse (KO-BH-1)

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected molding sand system equipment" for the purpose of these unit-specific conditions, includes the emission units described in Conditions 7.2.1 and 7.2.2.
- b. The affected molding sand system equipment is subject to 35 IAC 212.123 which provides that:
  - i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122 [35 IAC 212.123(a)].
  - ii. The 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(b)].
- c. 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].
- d. The affected molding sand system equipment is subject to 35 IAC 212.321(b) or 212.322(b), which provides that:

- i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (see also Attachment 1) [35 IAC 212.321(a)].
  - ii. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced prior to April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 1) [35 IAC 212.322(a)].
- e. The affected molding sand system equipment is subject to 35 IAC 219 Subpart G, Use of Organic Material, which provides that:
- i. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in Condition 7.1.3(f)(ii) (see also 35 IAC 219.302) and the following exception: If no odor nuisance exists the limitation of this Condition shall apply only to photochemically reactive material [35 IAC 219.301].
  - ii. Emissions of organic material in excess of those permitted by Condition 7.1.3(f)(i) (see also 35 IAC 219.301) are allowable if such emissions are controlled by a vapor recovery system which absorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere. [35 IAC 219.302(b)].

- f. The affected molding sand system equipment is subject to the emission limits identified in Condition 5.2.2.

7.2.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected molding sand system equipment not being subject to 35 IAC 219 Subpart TT, because the control requirements in Subpart TT shall apply to iron and steel production [35 IAC 219.980(e)].

7.2.5 Operational And Production Limits And Work Practices

- a. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.
- b. Operation of the Mold Spraying shall not exceed 27,750 molds per month and 200,000 molds per year [T1N].

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected molding sand system equipment is subject to the following:

- a. Emissions from the molding floors and mold spraying shall not exceed the following limits:

<u>Equipment</u>	<u>Pollutant</u>	<u>Emissions</u>	
		<u>(Lb/Hour)</u>	<u>(Ton/Year)</u>
MSS-6	PM	0.21	0.5
MSS-1	PM	3.87	16.90
MSS-1	PM <sub>10</sub>	2.09	9.13
MSSP	PM	0.1	0.44

These limits are based on the maximum controlled emission rates and maximum hours of operation.

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 Permits 81100074, 89050085, and 93120035, pursuant to 35 IAC Part 203 or 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 35 IAC Part 203 or 40 CFR 52.21 [T1].

- b. Emissions from mold spraying shall not exceed the following limits:

<u>Equipment</u>	<u>Pollutant</u>	<u>Emissions</u>	
		<u>(Lb/Month)</u>	<u>(Ton/Year)</u>
MSSP	VOM	4.30	31.00

These limits are based on the maximum emission rates and operating limit in Condition 7.2.5.

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 contain revisions to previously issued Permit 89050085. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification. These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the annual limit was increased by 10.07 tons per year to include emissions from all mold spraying operations. Contemporaneous VOM emissions increases are 24.94 tons per year (Pep Set core

making lines, constructed in 2000 and 2003, OXYFUEL ladle preheater in 1999), so the net increase is less than 40 tons per year, which is the significant emission rate [T1R].

7.2.7 Testing Requirements

None

7.2.8 Monitoring Requirements

None

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 affected molding sand system equipment to demonstrate compliance with Conditions 5.5.1, 7.2.3, 7.2.5, and 7.2.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Sand throughput (tons/month and tons/year);
- b. Number of molds sprayed (per month and per year);
- c. Emissions of PM, PM<sub>10</sub>, and VOM (lb/hour, tons/month, and tons/year); and
- d. Records of inspection, maintenance, and repair activities for all equipment shall be kept on site and shall include as a minimum:
  - i. Date of inspection, maintenance, and repair activities.
  - ii. Description of maintenance or repair activity if not routine preventative maintenance.
  - iii. Reason for maintenance or repair if not routine or preventative.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected molding sand system equipment 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. If there is a deviation from the requirements of Conditions 7.2.5 or 7.2.6 as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

- a. Compliance with the requirements of Condition 7.2.3 is addressed by the operational limits and recordkeeping required by Conditions 7.2.5 and 7.2.9.
- b. Compliance with the emission limits in Conditions 5.5.1 and 7.2.6 shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below:

- i. Emission factors for the molding floors:

Pollutant	Emission Factor (lb/ton sand processed)	Emission Factor Source
PM	3.30	mass balance
PM <sub>10</sub>	2.47	mass balance
VOM	0.11	mass balance

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/ton)} \times \text{Sand Processed (ton)} \times [1 - \eta_{\text{Capture}} \times \eta_{\text{Control}}]$$

where:

$$\eta_{\text{Capture}} = \text{Capture Efficiency}/100\%$$

$$\eta_{\text{Control}} = \text{Control Efficiency}/100\%$$

(Efficiency as specified by manufacturers or vendors of the control devices or the most recent emissions tests)

- ii. Emission factors for mold spraying:

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Pollutant	Emission Factor (lb/mold)	Emission Factor Source
VOM	0.31	mass balance

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/mold)} \times \text{Molds Sprayed}$$

- iii. Emission factors for the skid shakeout, railcar sand system, and casting knockout:

Pollutant	Emission Factor (lb/ton sand processed)	Emission Factor Source
PM	0.75	mass balance
PM <sub>10</sub>	0.54	mass balance

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/ton)} \times \text{Sand Processed (ton)} \times [1 - \eta_{\text{Capture}} \times \eta_{\text{Control}}]$$

where:

$$\eta_{\text{Capture}} = \text{Capture Efficiency}/100\%$$

$$\eta_{\text{Control}} = \text{Control Efficiency}/100\%$$

(Efficiency as specified by manufacturers or vendors of the control devices or the most recent emissions tests)

7.3 Unit - Metal Processing  
 Control - Dust Collectors

7.3.1 Description

Scrap steel is transported from storage to one of two electric arc furnaces (EF-1 and 2). Bottom drop ladles are filled with scrap metal and transferred to the furnaces via overhead crane. Both furnaces are equipped with sidedraft collection hoods that swing away from the furnace to allow an alternate charging location for scrap steel.

After each addition of scrap steel, the furnace roof is closed and the electrodes are lowered to begin the melting process. The side draft hood captures emissions from the melting and refining processes. The furnace ductwork allows each furnace to be tilted and remain connected to the capture equipment. During the melting process, slag accumulates on top of the molten steel and is poured off as a waste byproduct.

When refining process is complete, the furnace is tapped by tipping the furnace and pouring the liquid steel into a pre-heated ladle. Once in the ladle, the molten steel is transferred via overhead crane for pouring and casting (PR/CST-1).

7.3.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
EF-1	Electric Arc Furnace No. 1	Dust Collector (EF-BH-1)
EF-2	Electric Arc Furnace No. 2	Dust Collector (EF-BH-2)
PR/CST-1	Pouring and Casting	None

7.3.3 Applicability Provisions and Applicable Regulations

- a. The "affected metal processing equipment" for the purpose of these unit-specific conditions, includes the emission units described in Conditions 7.3.1 and 7.3.2.
- b. The affected metal processing equipment is subject to 35 IAC 212.123 which provides that:

- i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122 [35 IAC 212.123(a)].
  - ii. The 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(b)].
- c. 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].
- d. The affected metal processing equipment is subject to 35 IAC 212.321(b) or 212.322(b), which provides that:
- i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (see also Attachment 1) [35 IAC 212.321(a) and 212.448].
  - ii. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission

unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced prior to April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 1) [35 IAC 212.322(a) and 212.448].

- e. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm [35 IAC 214.301].
- f. The affected metal processing equipment is subject to 35 IAC 219 Subpart G, Use of Organic Material, which provides that:
  - i. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in Condition 7.1.3(f) (ii) (see also 35 IAC 219.302) and the following exception: If no odor nuisance exists the limitation of this Condition shall apply only to photochemically reactive material [35 IAC 219.301].
  - ii. Emissions of organic material in excess of those permitted by Condition 7.1.3(f) (i) (see also 35 IAC 219.301) are allowable if such emissions are controlled by a vapor recovery system which absorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere. [35 IAC 219.302(b)].
- g. The affected metal processing equipment is subject to the emission limits identified in Condition 5.2.2.

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

- a. The fuel burning portion of the affected metal processing equipment is not subject to 35 IAC Part 217, Subparts B and C, Nitrogen Oxide Emissions from New and Existing Fuel Combustion Emission Sources, because none of the equipment is by definition a fuel combustion emission unit.

- b. The fuel burning portions of the affected metal processing equipment is not subject to 35 IAC Part 216, Subpart B, Carbon Monoxide Emissions from Fuel Combustion Emission Units, because none of the equipment is by definition a fuel combustion emission unit.
- c. This permit is issued based on the affected metal processing equipment not being subject to 35 IAC 219 Subpart TT, because the control requirements in Subpart TT shall apply to iron and steel production [35 IAC 219.980(e)].
- d. The affected metal processing equipment is not subject to 40 CFR 60 Subparts AA or AAa, since the electric arc furnaces were constructed prior to October 21, 1974, which is the applicability date for this regulation.

7.3.5 Operational And Production Limits And Work Practices

The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.

7.3.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

None

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 metal processing equipment to demonstrate compliance with Conditions 5.5.1 and 7.3.3, pursuant to Section 39.5(7)(b) of the Act:

- a. Material throughput (tons/month and tons/year);

- b. Emissions of PM, SO<sub>2</sub>, NO<sub>x</sub>, and VOM (tons/month and tons/year); and
- c. Records of inspection, maintenance, and repair activities for all equipment shall be kept on site and shall include as a minimum:
  - i. Date of inspection, maintenance, and repair activities.
  - ii. Description of maintenance or repair activity if not routine preventative maintenance.
  - iii. Reason for maintenance or repair if not routine or preventative.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected metal processing equipment with the permit requirements, 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.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

- a. Compliance with the requirements of Condition 7.3.3 is addressed by the operational limits and recordkeeping required by Conditions 7.3.5 and 7.3.9.
- b. Compliance with the emission limits in Condition 5.5.1 shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formulas listed below:
  - i. Emission factors for the electric arc furnaces:

Pollutant	Emission Factor (lb/ton steel cast)	Emission Factor Source
PM	13.00	FIRE: SCC 3-04-007-01
PM <sub>10</sub>	6.30	assume 48.5% of PM
NO <sub>x</sub>	0.20	FIRE: SCC 3-04-007-01

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Pollutant	Emission Factor (lb/ton steel cast)	Emission Factor Source
SO <sub>2</sub>	0.25	FIRE: SCC 3-04-007-01
VOM	0.35	FIRE: SCC 3-04-007-01

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/ton)} \times \text{Steel Processed (ton)} \times [1 - \eta_{\text{capture}} \times \eta_{\text{control}}]$$

Where:

$$\eta_{\text{capture}} = \text{Capture Efficiency}/100\%$$

$$\eta_{\text{control}} = \text{Control Efficiency}/100\%$$

(Efficiency as specified by manufacturers or vendors of the control devices or the most recent emissions tests)

ii. Emission factors for pouring and casting:

Pollutant	Emission Factor (lb/ton steel cast)	Emission Factor Source
PM	2.80	FIRE: SCC 3-04-007-08
PM <sub>10</sub>	2.80	FIRE: SCC 3-04-007-08
NO <sub>x</sub>	0.01	FIRE: SCC 3-04-007-08
SO <sub>2</sub>	0.02	FIRE: SCC 3-04-007-08
VOM	0.14	FIRE: SCC 3-04-007-08

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/ton)} \times \text{Steel Processed (ton)}$$

7.4 Unit - Casting and Finishing  
 Control - Dust Collectors

7.4.1 Description

Steel castings are transported from knockout on either skid or overhead conveyor. The overhead conveyor can feed the castings directly into the No. 5 blast machine (SB-5). The castings can also go through the No. 7 blast machine (SB-7) for an initial shotblast cleaning. After an initial shotblast cleaning, castings must have excess steel removed within arc air stations.

After steel castings have gone through arc air welding, the castings must be heat treated for steel fatigue relief. After heat treatment, the castings go through a second shotblast cleaning process. Castings are further cleaned via grinding, chipping, and gas cutting as required.

Depending on the casting size, some castings can go through abrasive cleaning within one of three smaller steel shot abrasive machines, a smaller shot blast machine (SB-6) and tumbleblasts (TB-1 and 2). Smaller castings must also be cleaned via arc air welding, grinding, chipping, and gas cutting as required. Some smaller castings are further heat treated and water quenched (hardened) as required.

PM emissions from the shot blast and tumbleblast machines are captured and controlled by emission control equipment.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
SB-5	No. 5 Shot Blast Machine	Dust Collector (SB-BH-5)
SB-6	No. 6 Shot Blast Machine	Dust Collector (SB-BH-6)
SB-7	No. 7 Shot Blast Machine	Dust Collector (S-BH-7)
TB-1	Tumble Blast Machine	Dust Collector Baghouse (TB-BH-1)
TB-2	Tumble Blast Machine	Baghouse (TB-BH-2)

7.4.3 Applicability Provisions and Applicable Regulations

- a. The "affected blasting operations" for the purpose of these unit-specific conditions, includes the emission units described in Conditions 7.4.1 and 7.4.2.
- b. The affected blasting operations are subject to 35 IAC 212.123 which provides that:
  - i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart [35 IAC 212.123(a)].
  - 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 305m (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(b)].
- c. 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].
- d. The affected blasting operations are subject to the emission limits identified in Condition 5.2.2.

7.4.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected blasting operations not being subject to 35 IAC 212, Subpart L, Particulate Matter Emissions from Process Emission Units, pursuant to 35 IAC 212.681, which excludes shot blasting and grinding operations from this requirement.

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

7.4.5 Operational And Production Limits And Work Practices

The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.

7.4.6 Emission Limitations

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

- a. Emissions from the No. 7 Shot Blast Machine and No. 1 Tumble Blast Machine shall not exceed the following limits:

<u>Equipment</u>	<u>Pollutant</u>	<u>Emissions</u>	
		<u>(Lb/Hour)</u>	<u>(Ton/Year)</u>
SB-7	PM	0.57	2.5
TB-1	PM	0.1	0.44
TB-1	PM <sub>10</sub>	0.1	0.44

These limits are based on the maximum emission rates and maximum hours of operation from No. 7 Shot Blast Machine and negligible emission rates from No. 1 Tumble Blast Machine.

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 Permits 82100001 and 95010100, pursuant to 35 IAC Part 203 or 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 35 IAC Part 203 or 40 CFR 52.21 [T1].

7.4.7 Testing Requirements

None

7.4.8 Monitoring Requirements

None

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 blasting operations to demonstrate compliance with Conditions 5.5.1, 7.4.3, and 7.4.6, pursuant to Section 39.5(7) (b) of the Act:

- a. Amount of steel cast (tons/month and tons/year);
- b. Emissions of PM and PM<sub>10</sub> (lb/hour, tons/month and tons/year); and
- c. Records of inspection, maintenance, and repair activities for all equipment shall be kept on site and shall include as a minimum:
  - i. Date of inspection, maintenance, and repair activities.
  - ii. Description of maintenance or repair activity if not routine preventative maintenance.
  - iii. Probable cause for requiring maintenance or repair if not routine or preventative.
  - iv. A weekly log that includes but is not limited to deviations from normal pressure drops across the PM emission control devices.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of an affected blasting operation 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. If there is a deviation from the requirements of Condition 7.4.6 as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

- a. Compliance with the requirements of Condition 7.4.3 is addressed by the operational limits and recordkeeping required by Conditions 7.4.5 and 7.4.9.
- b. Compliance with the emission limits in Conditions 5.5.1 and 7.4.6 shall be based on the recordkeeping requirements in Condition 7.4.9 and the emission factors and formulas listed below:

Pollutant	Emission Factor (lb/ton steel cast)	Emission Factor Source
PM	66.0	mass balance
PM <sub>10</sub>	54.0	mass balance

$$\text{Emissions (lb)} = \text{Emissions Factor (lb/ton)} \times \text{Steel Processed (ton)} \times [1 - \eta_{\text{Capture}} \times \eta_{\text{Control}}]$$

Where:

$$\eta_{\text{Capture}} = \text{Capture Efficiency}/100\%$$

$$\eta_{\text{Control}} = \text{Control Efficiency}/100\%$$

(Efficiency as specified by manufacturers or vendors of the control devices or the most recent emissions tests)

7.5 Unit - Paint Booth  
 Control - Water Wash Filter

7.5.1 Description

Steel castings designated for painting are transported on skids to the paint booth (CP-1). VOM emissions occur from these operations due to evaporation of the organic material in the coatings during the coating and drying processes. In addition, airborne paint particulates are controlled by a wet wash filter.

7.5.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
CP-1	Casting Paint Booth	Water Wash Filter

7.5.3 Applicability Provisions and Applicable Regulations

- a. An "affected paint booth" for the purpose of these unit-specific conditions are the coating operations described in conditions 7.2.1 and 7.2.2.
- b. The affected paint booth is subject to the opacity and emission limits identified in Condition 5.2.2.
- c. The affected paint booth is subject to 35 IAC 212, Subpart L: Particulate Matter from Process Emission Sources, which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 1) [35 IAC 212.321(a)].

- d. The affected paint booth is subject to 35 IAC 219.204(j) for miscellaneous metal parts and products coating, which provides that:

No owner or operator of a coating line shall cause or allow the emission of VOM to exceed

the following emission limitations for the coating as applied to miscellaneous metal parts and products. The following emission limitations are expressed in units of VOM per volume of coating (excluding water and any compounds which are specifically exempted from the definition of VOM) as delivered to the coating applicator:

<u>Application</u>	<u>(kg/liter)</u>	<u>(lb/gal)</u>
Clear Coating	0.52	4.3
Extreme Performance Air Dried	0.42	3.5
Extreme Performance Baked	0.40	3.3
Other Air Dried Coating	0.40	3.3
Other Baked Coating	0.34	2.8

7.5.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected paint booth not being subject to 35 IAC 219.301, Use of Organic Material, pursuant to 35 IAC 219.209, which excludes coating lines from this requirement.
- b. This permit is issued based on the affected paint booth not being subject to 40 CFR Part 63, Subpart MMMM, because the source is not a major source of HAP emissions (see also Condition 5.5.2).
- c. This permit is issued based on the affected paint booth not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected paint booth does not have potential pre-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

7.5.5 Operational And Production Limits And Work Practices

- a. The Permittee shall at all times, to the extent practicable, maintain and operate the affected paint booths, including the associated filter equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
- b. An adequate inventory of spare filters shall be maintained.

7.5.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.5.7 Testing Requirements

Testing for VOM content of coatings and other materials shall be performed as follows [35 IAC 219.105(a), 219.211(a), and Section 39.5(7)(b) of the Act]:

- a. Upon reasonable request by the Illinois EPA, the VOM content of specific coatings and cleaning solvents used in each affected paint booth shall be determined according to USEPA Reference Method 24 or 24A of 40 CFR 60, Appendix A, and the procedures of 35 IAC 219.105(a) and 219.211(a).
- b. This testing may be performed by the supplier of a material provided that the supplier provides appropriate documentation for such testing to the Permittee and the Permittee's records required by Condition 7.5.9 directly reflect the application of such material and separately account for any additions of solvent.

7.5.8 Monitoring Requirements

- a. The Permittee shall visually inspect the filtering system and check for particulate build-up on a regular basis in order to ensure proper operation of the filters and the need for replacement.

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 paint booth to demonstrate compliance with Conditions 5.5.1 and 7.5.3 through 7.5.8, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall collect and record the following operational information:
  - i. The name and identification number of each coating as applied on the affected paint booths;

- ii. The usage of each coating, solvent, and any other material containing VOM used on the affected paint booths (gallon/year);
  - iii. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each month on the affected paint booths;
  - iv. The VOM content (weight percent) and density (pound/gallon) of each coating, cleaning solvent, and any other material containing VOM;
  - v. The solids content of each coating used (volume percent);
- b. The annual VOM and PM emissions of the affected paint booths, based on calculation procedures specified in Condition 7.5.12.
  - c. Results of filter inspections and dates of replacements made.
  - d. Records of the testing of VOM content of each coating and cleaning solvent as tested pursuant to the conditions of this section, which include the following [Section 39.5(7) (e) of the Act]:
    - i. Identification of materials used, results of analysis, documentation of analysis methodology, and person performing analysis; or
    - ii. Records from the supplier of the material, such as material safety data sheets, certified product data sheets, or environmental data sheets, which document such testing.

#### 7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected paint booth 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. If there is a deviation from the requirements of Conditions 7.5.5 or 7.5.6 as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

#### 7.5.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected paint booth without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

- a. Usage of coatings, thinners, cleaning solvents with various VOM contents provided that the materials are tested in accordance with the Condition 7.5.7 and do not exceed the VOM content limitations of Condition 7.5.3 or the source wide emission limitations of Condition 5.5.1.

#### 7.5.12 Compliance Procedures

- a. Compliance with the PM limitations in Condition 7.5.3 is assured and achieved by the proper operation and maintenance of the filtering systems, as required by Conditions 7.5.5 and 7.5.8, and the work practices inherent in the operation of the affected paint booths.
- b. Compliance of each coating with the VOM emission limitations in Condition 7.5.3 shall be based on the recordkeeping requirements in Condition 7.5.9 and by the use of either testing as required in Condition 7.5.7 or by use of the formulae listed below:

$$\text{Coating VOM Content} = V \times D / [1 - W \times D]$$

Where:

V = Percent VOM in the coating (%)

D = Overall coating density (lb/gal)

$$W = \Sigma (w_i/d_i)$$

Where:

$w_i$  = Percent exempt compound i in the coating,

$d_i$  = Overall density of exempt compound i, in lb/gal

and the summation  $\Sigma$  is applied over water and all exempt compounds i, in the coating.

c. To determine compliance with Condition 5.5.1, VOM and PM emissions from the affected paint booths shall be calculated based on the following equations:

i. Particulate Matter Emissions (Spray Application):

$$\text{PM Emissions (lb)} = (\text{Coating Usage, gal}) \times (\text{Coating Density, lb/gal}) \times (\text{wt. \% Solids}) \times [1 - (\text{Transfer Efficiency (\%)/100}]$$

ii. Volatile Organic Material Emissions:

$$\text{VOM Emissions (lb)} = \text{Coating Usage (gal)} * \text{Coating Density (lb/gal)} * \text{VOM Content}^A \text{ of Coating (wt. \%)} + \text{Solvent/Thinner Usage (gal)} * \text{Solvent/Thinner Density (lb/gal)} * \text{VOM Content of Solvent/Thinner (wt. \%)}.$$

<sup>A</sup> The Permittee may use the VOM content (minus water and any compounds which are specifically exempted from the definition of VOM) from MSDS if that specific coating material is applied as supplied. If the Permittee is preparing any batch of coating material to be applied, VOM content shall be determined by laboratory analysis and the records shall be kept indicating detailed procedure of the test performed, including the quality control data.

7.6 Unit Natural Gas Combustion Sources

7.6.1 Description

The No. 2 tower oven (TO-2) is an indirect heat source used for curing PANB cores. The ladle pre-heater (LDP-1) is used for directly heating ladles to the required temperature prior to pouring steel. The heat treat furnaces are annealing and tempering furnaces used in heating steel. The low profile center plate furnace is a burner used for surface tempering low profile center plates.

7.6.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
TO-2	No. 2 Tower Oven (5.5 mmBtu/hr)	None
LDP-1	Ladle Preheater (9.0 mmBtu/hr)	None
HT-17	Heat Treating Furnace No. 17 (10 mmBtu/hr)	None
HT-33	Heat Treating Furnace No. 33 (10 mmBtu/hr)	None
HT-13	Heat Treating Furnace No. 13 (30 mmBtu/hr)	None
HT-14	Heat Treating Furnace No. 14 (30 mmBtu/hr)	None
HT-35	Heat Treating Furnace No. 35 (11 mmBtu/hr)	None
LPCP-1	Low Profile Center Plate Line Finishing (5.86 mmBtu/hr)	None

7.6.3 Applicability Provisions and Applicable Regulations

- a. The "affected fuel combustion units" for the purpose of these unit specific conditions, are the emission units described in Conditions 7.3.1 and 7.3.2.
- b. Each affected fuel combustion unit is subject to the opacity and emission limits identified in Condition 5.2.2.
- c. Each heat treating furnace is subject to 35 IAC 216.121, which states that the emission of carbon monoxide (CO) into the atmosphere from any fuel

combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) shall not exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].

7.6.4 Non-Applicability of Regulations of Concern

- a. Each affected fuel combustion unit is not subject to 35 IAC 217.141, because the actual heat input of each affected fuel combustion unit is less than 73.2 MW (250 mmBtu/hr).
- b. Pursuant to 35 IAC 219.303, each affected fuel combustion unit is not subject to 35 IAC 219.301, Use of Organic Material.
- c. Each affected fuel combustion unit is not subject to the New Source Performance Standard 40 CFR 60 Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units, because each affected fuel combustion unit either was constructed prior to June 9, 1989, the applicability date of this regulation, has a maximum design heat input capacity less than 2.9 MW (10 mmBtu/hr), or is not a steam generating unit.
- d. This permit is issued based on the affected fuel combustion units not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected fuel combustion units do not use an add-on control device to achieve compliance with an emission limitation or standard.

7.6.5 Operational And Production Limits And Work Practices

- a. Natural gas shall be the only fuel burned in the Low Profile Center Plate Line (LPCP-1) flame hardening furnace. This limit was established in Permit 95100045.
- b. Natural gas shall be the only fuel burned in the Ladle Preheater (LDP-1). This limit was established in Permit 99040053.

7.6.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected fuel combustion units are subject to the following:

- a. Emissions from the No. 2 Tower Oven (TO-2) shall not exceed the following limits:

<u>Pollutant</u>	Emissions	<u>(Ton/Year)</u>
PM		0.4
SO <sub>2</sub>		7.4
NO <sub>x</sub>		3.9
VOM		0.2
CO		0.9

These limits are based on the standard emission factors, firing of No. 2 distillate oil, the maximum firing rate of 5.5 mmBtu/hr, and maximum hours of operation.

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 82070020, 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. NO<sub>x</sub> emissions from the Low Profile Center Plate Line (LPCP-1) flame hardening furnace shall not exceed 0.59 pounds per hour and 2.07 tons per year. These limits are based on the standard emission factors, the maximum firing rate, and maximum hours of operation.

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 95100045, 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].

- c. Emissions from the flame hardeners for the heat treating furnaces shall not exceed the following limits:

<u>Pollutant</u>	Emissions	
	<u>(Lb/Hr)</u>	<u>(Ton/Year)</u>
PM	0.1	0.44
SO <sub>2</sub>	0.1	0.44
NO <sub>x</sub>	0.34	1.02
VOM	0.1	0.44
CO	0.1	0.44

These limits are based on standard NO<sub>x</sub> emission factors, negligible emissions of other pollutants, maximum firing rates, and maximum hours of operation.

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 97090083, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and 35 IAC Part 203. 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 and 35 IAC Part 203 [T1].

7.6.7 Testing Requirements

None

7.6.8 Monitoring 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 fuel combustion units to demonstrate compliance with Conditions 5.5.1 and 7.6.6, pursuant to Section 39.5(7) (b) of the Act:

- a. Monthly and annual natural gas usage in the affected boilers ( $\text{ft}^3/\text{month}$  and  $\text{ft}^3/\text{year}$ );
- b. Heat content of natural gas ( $\text{Btu}/\text{ft}^3$ ); and
- c. Annual aggregate  $\text{NO}_x$ , CO, PM,  $\text{SO}_2$ , and VOM emissions from each affected boiler, based on fuel consumption and the applicable emission factors, with supporting calculations.

7.6.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of an affected fuel combustion unit 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. The Permittee shall notify the Illinois EPA within 60 days of operation of an affected fuel combustion unit that may not have been in compliance with the opacity limitations in Condition 5.2.2(b), with a copy of such record for each incident.
- b. If there is a deviation from the requirements of Conditions 7.6.5 or 7.6.6 as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.6.12 Compliance Procedures

- a. Compliance with the CO emission limit in Condition 7.6.3(c) is demonstrated under inherent operating conditions of the affected fuel combustion units combusting only natural gas, so that no compliance procedures are set in this permit addressing this requirement.
- b. Compliance with the emission limits in Condition 5.5.1 shall be based on the recordkeeping requirements in Condition 7.6.9 and the emission factors and formulas listed below:
  - i. Emissions from the affected fuel combustion units burning natural gas shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factor (lb/10<sup>6</sup> ft<sup>3</sup>)</u>
PM	7.6
SO <sub>2</sub>	0.6
VOM	5.5
NO <sub>x</sub>	100.0

These are the emission factors for uncontrolled natural gas combustion in small boilers (< 100 mmBtu/hr), Tables 1.4-1 and 1.4-2, AP-42, Volume I, Supplement F, March 1998.

Emissions (lb) = Natural gas consumed (ft<sup>3</sup>) multiplied by the appropriate emission factor.

- ii. Total emissions for each pollutant are to be determined by combining the results of Conditions 7.6.12(b) (i) for all affected fuel combustion units.

## 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 \_\_\_\_\_ **{insert public notice start date}** (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:

FINAL DRAFT/PROPOSED CAAPP PERMIT  
ASF - Keystone, Inc.  
I.D. No.: 119040AAC  
Application No.: 96030102  
October 7, 2003

- 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  
2009 Mall Street  
Collinsville, Illinois 62234
  - iii. Illinois EPA - Air Permit Section  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section (MC 11)  
P.O. Box 19506  
Springfield, Illinois 62794-9506
  - iv. USEPA Region 5 - Air Branch  
  
USEPA (AE - 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) (1), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 - Particulate Matter Emissions from Process Emission Units

10.1.1 Section 212.321 - Process Emission Units For Which Construction or Modification Commenced On or After April 14, 1972.

- a. Except as further provided in 35 IAC Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.
- b. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

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

Where:

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

- i. Up to process weight rates of 408 Mg/hr (450 Ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	Ton/hr
E	kg/hr	lb/hr
A	1.214	2.54
B	0.534	0.534

- ii. For process weight rate greater than or equal to 408 Mg/hr (450 Ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	Ton/hr
E	kg/hr	lb/hr
A	11.42	24.8
B	0.16	0.16

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

Metric		English	
P	E	P	E
<u>Mg/hr</u>	<u>kg/hr</u>	<u>Ton/hr</u>	<u>lb/hr</u>
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	5.35
4.5	2.7	5.00	6.00
9.0	3.9	10.00	8.70
13.0	4.8	15.00	10.80
18.0	5.7	20.00	12.50
23.0	6.5	25.00	14.00
27.0	7.1	30.00	15.60
32.0	7.7	35.00	17.00
36.0	8.2	40.00	18.20
41.0	8.8	45.00	19.20
45.0	9.3	50.00	20.50
90.0	13.4	100.00	29.50
140.0	17.0	150.00	37.00
180.0	19.4	200.00	43.00
230.0	22.0	250.00	48.50
270.0	24.0	300.00	53.00
320.0	26.0	350.00	58.00
360.0	28.0	400.00	62.00
408.0	30.1	450.00	66.00
454.0	30.4	500.00	67.00

Where:

P = Process weight rate in Mg/hr or Ton/hr, and  
 E = Allowable emission rate in kg/hr or lb/hr.

10.1.2 Section 212.322 - Process Emission Units For Which  
 Construction or Modification Commenced Prior to April 14, 1972

- a. Except as further provided in 35 IAC Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.
- b. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

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

Where:

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

- i. For process weight rates up to 27.2 Mg/hr (30 Ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	Ton/hr
E	kg/hr	lb/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

- ii. For process weight rates in excess or 27.2 Mg/hr (30 Ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	Ton/hr
E	kg/hr	lb/hr
A	25.21	55.0
B	0.11	0.11
C	- 18.4	- 40.0

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

Metric		English	
P	E	P	E
<u>Mg/hr</u>	<u>kg/hr</u>	<u>Ton/hr</u>	<u>lb/hr</u>
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
9.0	8.7	10.00	19.20
13.0	11.1	15.00	25.20
18.0	13.8	20.00	30.50
23.0	16.2	25.00	35.40
27.2	18.15	30.00	40.00
32.0	18.8	35.00	41.30
36.0	19.3	40.00	42.50
41.0	19.8	45.00	43.60
45.0	20.2	50.00	44.60
90.0	23.2	100.00	51.20
140.0	25.3	150.00	55.40
180.0	26.5	200.00	58.60
230.0	27.7	250.00	61.00
270.0	28.5	300.00	63.10
320.0	29.4	350.00	64.90
360.0	30.0	400.00	66.20
400.0	30.6	450.00	67.70
454.0	31.3	500.00	69.00

Where:

P = Process weight rate in Mg/hr or Ton/hr, and  
 E = Allowable emission rate in kg/hr or lb/hr.

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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 Guidance on Revising This Permit

The Permittee must submit an application to the Illinois EPA using the appropriate revision classification in accordance with Sections 39.5(13) and (14) of the Act and 35 IAC 270.302. Specifically, there are currently three classifications for revisions to a CAAPP permit. These are:

1. Administrative Permit Amendment;
2. Minor Permit Modification; and
3. Significant Permit Modification.

The Permittee must determine, request, and submit the necessary information to allow the Illinois EPA to use the appropriate procedure to revise the CAAPP permit. A brief explanation of each of these classifications follows.

1. Administrative Permit Amendment
  - Corrects typographical errors;
  - Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - Requires more frequent monitoring or reporting by the Permittee;
  - Allows for a change in ownership or operational control of the source where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittees has been submitted to the Illinois EPA. This shall be handled by completing form 272-CAAPP, REQUEST FOR OWNERSHIP CHANGE FOR CAAPP PERMIT; or
  - Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits.

2. Minor Permit Modification

- Do not violate any applicable requirement;
- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; and
  - An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA.
- Are not modifications under any provision of Title I of the CAA;
- Are not required to be processed as a significant permit modification; and
- Modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches.

An application for a minor permit modification shall include the following:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- The source's suggested draft permit/conditions;

- Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
- Information as contained on form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT for the Illinois EPA to use to notify USEPA and affected States.

3. Significant Permit Modification

- Applications that do not qualify as either minor permit modifications or as administrative permit amendments;
- Applications requesting a significant change in existing monitoring permit terms or conditions;
- Applications requesting a relaxation of reporting or recordkeeping requirements; and
- Cases in which, in the judgment of the Illinois EPA, action on an application for modification would require decisions to be made on technically complex issues.

An application for a significant permit modification shall include the following:

- A detailed description of the proposed change(s), including all physical changes to equipment, changes in the method of operation, changes in emissions of each pollutant, and any new applicable requirements which will apply as a result of the proposed change. Note that the Permittee need only submit revised forms for equipment and operations that will be modified.

The Illinois EPA requires the information on the following appropriate forms to be submitted in accordance with the proper classification:

- Form 273-CAAPP, REQUEST FOR ADMINISTRATIVE PERMIT AMENDMENT FOR CAAPP PERMIT; or
- Form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT; or

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- Form 200-CAAPP, APPLICATION FOR CAAPP PERMIT (for significant modification).

Application forms can be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms>.

Note that the request to revise the permit must be certified for truth, accuracy, and completeness by a responsible official.

Note that failure to submit the required information may require the Illinois EPA to deny the application. The Illinois EPA reserves the right to require that additional information be submitted as needed to evaluate or take final action on applications pursuant to Section 39.5(5)(g) of the Act and 35 IAC 270.305.



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

<b>Application For Construction Permit (For CAAPP Sources Only)</b>	<b>For Illinois EPA use only</b>
	ID number:
	Permit number:
Date received:	

This form is to be used by CAAPP sources to supply information necessary to obtain a construction permit. Please attach other necessary information and completed CAAPP forms regarding this construction/modification project.

<b>Source Information</b>		
1. Source name:		
2. Source street address:		
3. City:	4. Zip code:	
5. Is the source located within city limits? <input type="checkbox"/> Yes <input type="checkbox"/> No		
6. Township name:	7. County:	8. ID number:

<b>Owner Information</b>		
9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

<b>Operator Information (if different from owner)</b>		
14. Name		
15. Address:		
16. City:	17. State:	18. Zip code:

<b>Applicant Information</b>	
19. Who is the applicant? <input type="checkbox"/> Owner <input type="checkbox"/> Operator	20. All correspondence to: (check one) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Source
21. Attention name and/or title for written correspondence:	
22. Technical contact person for application:	23. Contact person's telephone number:

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

<b>Summary Of Application Contents</b>	
24. Does the application address whether the proposed project would constitute a new major source or major modification under each of the following programs: a) Non-attainment New Source Review – 35 IAC Part 203; b) Prevention of Significant Deterioration (PSD) – 40 CFR 52.21; c) Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources – 40 CFR Part 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
25. Does the application identify and address all applicable emissions standards, including those found in the following: a) Board Emission Standards – 35 IAC Chapter I, Subtitle B; b) Federal New Source Performance Standards – 40 CFR Part 60; c) Federal Standards for Hazardous Air Pollutants – 40 CFR Parts 61 and 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
26. Does the application include a process flow diagram(s) showing all emission units and control equipment, and their relationship, for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
27. Does the application include a complete process description for the emission units and control equipment for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
28. Does the application include the information as contained in completed CAAPP forms for all appropriate emission units and air pollution control equipment, listing all applicable requirements and proposed exemptions from otherwise applicable requirements, and identifying and describing any outstanding legal actions by either the USEPA or the Illinois EPA? Note: The use of "APC" application forms is not appropriate for applications for CAAPP sources. CAAPP forms should be used to supply information.	<input type="checkbox"/> Yes <input type="checkbox"/> No
29. If the application contains TRADE SECRET information, has such information been properly marked and claimed, and have two separate copies of the application suitable for public inspection and notice been submitted, in accordance with applicable rules and regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Not Applicable, No TRADE SECRET information in this application

Note 1: Answering "No" to any of the above may result in the application being deemed incomplete.

<b>Signature Block</b>	
This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.	
30. I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete. Authorized Signature:	
BY:	_____
AUTHORIZED SIGNATURE	TITLE OF SIGNATORY
_____	_____/_____/_____
TYPED OR PRINTED NAME OF SIGNATORY	DATE

Note 2: An operating permit for the construction/modification permitted in a construction permit must be obtained by applying for the appropriate revision to the source's CAAPP permit, if necessary.

10.5 Attachment 5 Guidance on Renewing This Permit

Timeliness - Pursuant to Section 39.5(5)(n) of the Act and 35 IAC 270.301(d), a source must submit to the Illinois EPA a complete CAAPP application for the renewal of a CAAPP permit not later than 9 months before the date of permit expiration of the existing CAAPP permit in order for the submittal to be deemed timely. Note that the Illinois EPA typically sends out renewal notices approximately 18 months prior to the expiration of the CAAPP permit.

The CAAPP application must provide all of the following information in order for the renewal CAAPP application to be deemed complete by the Illinois EPA:

1. A completed renewal application form 200-CAAPP, APPLICATION FOR CAAPP PERMIT.
2. A completed compliance plan form 293-CAAPP, COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE FOR CAAPP PERMIT.
3. A completed compliance certification form 296-CAAPP, COMPLIANCE CERTIFICATION, signed by the responsible official.
4. Any applicable requirements that became effective during the term of the permit and that were not included in the permit as a reopening or permit revision.
5. If this is the first time this permit is being renewed and this source has not yet addressed CAM, the application should contain the information on form 464-CAAPP, COMPLIANCE ASSURANCE MONITORING (CAM) PLAN.
6. Information addressing any outstanding transfer agreement pursuant to the ERMS.
7. a. If operations of an emission unit or group of emission units remain unchanged and are accurately depicted in previous submittals, the application may contain a letter signed by a responsible official that requests incorporation by reference of existing information previously submitted and on file with the Illinois EPA. This letter must also include a statement that information incorporated by reference is also being certified for truth and accuracy by the responsible official's signing of the form 200-CAAPP, APPLICATION FOR CAAPP PERMIT and the form 296-CAAPP, COMPLIANCE CERTIFICATION. The boxes should be marked

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yes on form 200-CAAPP, APPLICATION FOR CAAPP PERMIT, as existing information is being incorporated by reference.

- b. If portions of current operations are not as described in previous submittals, then in addition to the information above for operations that remain unchanged, the application must contain the necessary information on all changes, e.g., discussion of changes, new or revised CAAPP forms, and a revised fee form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT, if necessary.
8. Information about all off-permit changes that were not prohibited or addressed by the permit to occur without a permit revision and the information must be sufficient to identify all applicable requirements, including monitoring, recordkeeping, and reporting requirements, for such changes.
9. Information about all changes made under 40 CFR 70.4(b)(12)(i) and (ii) that require a 7-day notification prior to the change without requiring a permit revision.

The Illinois EPA will review all applications for completeness and timeliness. If the renewal application is deemed both timely and complete, the source shall continue to operate in accordance with the terms and conditions of its CAAPP permit until final action is taken on the renewal application.

Notwithstanding the completeness determination, the Illinois EPA may request additional information necessary to evaluate or take final action on the CAAPP renewal application. If such additional information affects your allowable emission limits, a revised form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT must be submitted with the requested information. The failure to submit to the Illinois EPA the requested information within the time frame specified by the Illinois EPA, may force the Illinois EPA to deny your CAAPP renewal application pursuant to Section 39.5 of the Act.

Application forms may be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms.html>.

If you have any questions regarding this matter, please contact a permit analyst at 217/782-2113.

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Mail renewal applications to:

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

JS:psj

I. INTRODUCTION

This source has applied for a Clean Air Act Permit Program (CAAPP) operating permit for its existing operation. The CAAPP is the program established in Illinois for the operating permits for significant stationary sources required by the federal Clean Air Act, as amended in 1990. The conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA.

AFS - Keystone, Inc. is located at 1700 Walnut Street in Granite City, Illinois. The source is a steel foundry, primarily engaged in the production of side frames and bolsters for rail cars.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Date Constructed	Emission Control Equipment
<b>Core Sand System</b>			
Pep Set	Polyurethane (No-Bake) Core Resin Machines	1/2000	None
ICM-1	Polyurethane (Cold Box) Core Resin Machine No. 1 (3.2 mmBtu/hr)	1/1996	Scrubber (ICM-SCB)
ICM-2	Polyurethane (Cold Box) Core Resin Machine No. 6 (4.4 mmBtu/hr)	1/1996	Scrubber (ICM-SCB)
CB-1	Ester Cured Phenolic Coldbox Core Machine	12/1993	None
SCM-1	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-23)	4/1959	None
SCM-2	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-26)	4/1960	None
SCM-3	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-47)	9/1977	None
SCM-4	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-32)	10/1971	None
SCM-5	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-37)	5/1975	None
SCM-6	Hot Box (Low Phenolic) No-Bake Core Machine (24-C-49)	5/1980	None
PANB	Phenolic/Acid No-Bake Core Resin Machine	3/1957	None
CS-1	Core Sand System	2/1969	Baghouse (CS-BH-1)
KD-1	Sand Dryer (6.1 mmBtu/hr)	12/1954	Cyclone (KD-DC-1)
KC-1	Sand Cooler	11/1981	Cyclone (KC-DC-1)
CR-1	Chromite Reclamation	6/1974	Cyclone (CR-DC-1)

Emission Unit	Description	Date Constructed	Emission Control Equipment
<b>Molding Sand System</b>			
MSS-1	No. 1 Molding Floor	6/1994	Baghouse (MSS-BH-1)
MSS-3	No. 3 Molding Floor	Prior to June 1968	Baghouse (MSS-BH-3)
MSS-6	No. 6 Molding Floor	5/1981	Dust Collector (MSS-BH-6)
MSSP	Mold Spraying	3/1990	None
SK-KO-1	Skid Shakeout	12/1980	Dust Collector (RC-SO-BH-1)
KO-1	Casting Knockout	7/1994	Baghouse (KO-BH-1)
<b>Metal Processing</b>			
EF-1	Electric Arc Furnace No. 1	6/1968	Dust Collector (EF-BH-1)
EF-2	Electric Arc Furnace No. 2	6/1968	Dust Collector (EF-BH-2)
PR/CST-1	Pouring and Casting		None
<b>Casting and Finishing</b>			
SB-5	No. 5 Shot Blast Machine	7/1994	Dust Collector (SB-BH-5)
SB-6	No. 6 Shot Blast Machine	1/1976	Dust Collector (SB-BH-6)
SB-7	No. 7 Shot Blast Machine	1/1979	Dust Collector (SB-BH-7)
TB-1	Tumble Blast Machine	4/1995	Dust Collector Baghouse (TB-BH-1)
TB-2	Tumble Blast Machine	6/1998	Baghouse (TB-BH-2)
CP-1	Casting Paint Booth	7/1981	Water Wash Filter
<b>Natural Gas Combustion Sources</b>			
TO-2	Tower Oven (5.5 mmBtu/hr)	5/1982	None
LDP-1	Ladle Preheater (9.0 mmBtu/hr)	11/1979	None
HT-17	Heat Treating Furnace No. 17 (10 mmBtu/hr)	6/1941	None
HT-33	Heat Treating Furnace No. 33 (10 mmBtu/hr)	6/1941	None
HT-13	Heat Treating Furnace No. 13 (30 mmBtu/hr)	1/1941	None
HT-14	Heat Treating Furnace No. 14 (30 mmBtu/hr)	8/1941	None
HT-35	Heat Treating Furnace No. 35 (11 mmBtu/hr)	9/1974	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
LPCP-1	Low Profile Center Plate Line Finishing (5.86 mmBtu/hr)	3/1996	None

### III. EMISSIONS

This source is required to have a CAAPP permit since it is a major source of emissions.

For purposes of fees, the source is allowed the following emissions:

#### Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	315.29
Sulfur Dioxide (SO <sub>2</sub> )	26.70
Particulate Matter (PM)	527.94
Nitrogen Oxides (NO <sub>x</sub> )	66.60
HAP, not included in VOM or PM	---
TOTAL	936.53

This permit is a combined Title I/CAAPP permit that may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the Clean Air Act and regulations promulgated thereunder, including 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within the permit by T1, T1R, or T1N. The source has requested that the Illinois EPA establish or revise such conditions in a Title I permit, consistent with the information provided in the CAAPP application. Any conditions established in a construction permit pursuant to Title I and not revised or deleted in this permit, remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them.

### IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois.

All emission sources in Illinois must comply with the federal New Source Performance Standards (NSPS). The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

All emission sources in Illinois must comply with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP). The Illinois

EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

A combined Title I/CAAPP permit contains terms and conditions established by the Illinois EPA pursuant to authority found in Title I provisions, e.g., 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Notwithstanding the expiration date on the first page of the 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.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 166.