



TABLE OF CONTENTS

	<u>PAGE</u>
1.0 SOURCE IDENTIFICATION	4
1.1 Source	
1.2 Owner/Parent Company	
1.3 Operator	
1.4 General Source Description	
2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT	5
3.0 INSIGNIFICANT ACTIVITIES	7
3.1 Identification of Insignificant Activities	
3.2 Compliance with Applicable Requirements	
3.3 Addition of Insignificant Activities	
4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE	11
5.0 OVERALL SOURCE CONDITIONS	15
5.1 Source Description	
5.2 Applicable Regulations	
5.3 Non-Applicability of Regulations of Concern	
5.4 Source-Wide Operational and Production Limits and Work Practices	
5.5 Source-Wide Emission Limitations	
5.6 General Recordkeeping Requirements	
5.7 General Reporting Requirements	
5.8 General Operational Flexibility/Anticipated Operating Scenarios	
5.9 General Compliance Procedures	
6.0 Emission Reduction Market System (ERMS)	22
6.1 Description of ERMS	
6.2 Applicability	
6.3 Recordkeeping and Reporting	
7.0 UNIT SPECIFIC CONDITIONS	24
7.1 Line 10 - Sodium Aluminate Production and Alum Storage	
7.2 Reserved	
7.3 Reserved	
7.4 Line 12 - Spray Drying	
7.5 Line 13 - Specialty Catalyst Extrusion	
7.6 Line 14 - Catalyst Powder Production	
7.7 Line 19 - Catalyst Impregnation	
7.8 Line 20 - Cogel	
7.9 Line 18 - Calcining System	
7.10 Alumina Railcar Unloading	
7.11 Boilers	

	<u>PAGE</u>
7.12 Storage Tanks	
7.13 NO <sub>x</sub> Scrubber System	
8.0 GENERAL PERMIT CONDITIONS	61
8.1 Permit Shield	
8.2 Applicability of Title IV Requirements	
8.3 Emissions Trading Programs	
8.4 Operational Flexibility/Anticipated Operating Scenarios	
8.5 Testing Procedures	
8.6 Reporting Requirements	
8.7 Obligation to Comply with Title I Requirements	
9.0 STANDARD PERMIT CONDITIONS	66
9.1 Effect of Permit	
9.2 General Obligations of Permittee	
9.3 Obligation to Allow Illinois EPA Surveillance	
9.4 Obligation to Comply with Other Requirements	
9.5 Liability	
9.6 Recordkeeping	
9.7 Annual Emissions Report	
9.8 Requirements for Compliance Certification	
9.9 Certification	
9.10 Defense to Enforcement Actions	
9.11 Permanent Shutdown	
9.12 Reopening And Reissuing Permit For Cause	
9.13 Severability Clause	
9.14 Permit Expiration and Renewal	
10.0 ATTACHMENTS	
10.1 Attachment 1 - Emissions of Particulate Matter from New Process Emission Units	1-1
10.2 Attachment 2 - Emissions of Particulate Matter from Existing Process Emission Units	2-1
10.3 Attachment 3 - Example Certification by a Responsible Official	3-1
10.4 Attachment 4 - Guidance on Revising This Permit	4-1
10.5 Attachment 5 - Form 199-CAAPP, Application For Construction Permit (For CAAPP Sources Only)	5-1
10.6 Attachment 6 - Guidance on Renewing This Permit	6-1

1.0 SOURCE IDENTIFICATION

1.1 Source

Grace Davison  
4099 West 71st Street  
Chicago, Illinois 60629  
773/838-3200

I.D. No.: 031600FMR  
Standard Industrial Classification: 2819, Industrial Inorganic  
Chemicals

1.2 Owner/Parent Company

W. R. Grace & Company - Conn.  
7500 Grace Drive  
Columbia, MD 21044

1.3 Operator

Grace Davison  
4099 West 71st Street  
Chicago, Illinois 60629

Nathan Carpenter/Plant Manager  
773/838-3200

1.4 General Source Description

The Grace Davison Company is located at 4099 West 71st Street in Chicago. The source manufactures inorganic chemicals for use in the petroleum industry. Raw materials are received by truck or railcar. The raw materials are routed to a storage tank farm and used in nine different production lines to make various products. Four natural gas boilers are used to produce steam for the process lines. The final products are packed and shipped off to the customer.

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
ATU	Allotment Trading Unit
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
CAS	Chemical Abstract Service
CO	Carbon Monoxide
CFR	Code of Federal Regulations
ERMS	Emissions Reduction Market System
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
Illinois EPA	Illinois Environmental Protection Agency
°K	Degrees Kelvin
kPa	Kilopascals
kg	Kilograms
kW	Kilowatts
l	liters
lb	Pound
ILCS	Illinois Compiled Statutes
MBtu	Million British thermal units
Mg	Megagrams
MW	Megawatts
mmHg	Millimeters of Mercury
mmscf	Million standard cubic feet
mo	Month
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
psia	pounds per square inch absolute
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
scf	Standard Cubic Feet
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide

T1	Title I - identifies Title I conditions that have been carried over from an existing 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
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material
yr	Year

### 3.0 INSIGNIFICANT ACTIVITIES

#### 3.1 Identification of Insignificant Activities

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

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

**Storage Tanks:**

Nickel Chloride F-2118  
Phosphoric Acid F-2425  
Gluconic Acid  
Sulfuric Acid  
Sodium Silicate

**Line 10 - Sodium Aluminate Production and Alum Storage:**

Sodium Aluminate Storage  
Alum Storage Tanks

**Batch Processes:**

Batch Tanks 1, 2, 6 and 7

**Line 11 - Filters:**

Alumina Storage Tanks 1 and 2  
Gel Filter 1 and 2  
West Gel Filter and Surge Tank  
Vacuum Wash Filters 1, 2 & 3  
Wash Filter

**Line 11 - Impregnation:**

Storage Tank A and B  
Storage Tank 316

**Line 12 - Spray Drying:**

Slurry Pot

**Line 13 - Mixing/Extrusion/Calcining:**

Acrison Hopper  
Extruder 1 and 2  
Conveyer 1

**Line 13 - Holoflite Processing:**

Filter Feed Tank TK-341  
Rotary Drum Filter  
Skip Hoist Holding Tank  
Screw Feeder  
Holoflite Settling Tank TK-7  
Recycle Tank

**Line 13 - Recycling System**

Screw Conveyer

**Line 14 - Extrusion System:**

Hopper  
Screw Feed  
Extruders 1 and 2  
Belt Spreader

**Line 14 - Recycle System:**

Screw Conveyer  
Ground Fines Storage Tanks 1 and 2

Feeders 1 and 2

Weigh Hopper 1

**Line 19 - Metals Makeup:**

Scale Tank TK-503

Measuring Tank TK-500

Solids Collection Tanks

**Line 19 - Soaks:**

Dip Tanks TK-505, TK-506, TK-507

Dip Solution Storage Tanks TK508-TK511 & TK520-TK527

**Line 19 - Claciner System:**

Feeder

**Line 20 - Mixing and Reaction:**

Tungsten Prep Tank F-2104

Feed Tank F-2117

Zeolite Tank F-2108

Filter Surge Tank F-2122

**Line 20 - Filter/Extrusion/Belt Drying:**

Membrane Filter S-2103

Conveyer

Hopper Z-2102

Extruder 1 & 2

Oscillating Spreader Z-2105, Z-2111 and Z-2115

Vibrating Conveyor Z-2116

**Line 20 - Slurry Rework:**

Uncalcined Rework Tank F-2110

Calcined Rework Tank F-2109

**Line 20 - HTU Drying:**

Tray Stackers Z-2120, Z-2122, Z-2124

**Line 20 - Waste Water Treatment:**

Collection Tanks F-2124A and F-2124B

Clarifier F-2125A

Break Tank F-2125B

Multimedia Filters S-2104A and S-2104B

Ion Exchange Units L-2104A, L-2104B and L-2104C

Holding Tanks F-2126A and F-2126B

Bottom Tank F-2123

**Line 18 - Soaks:**

Scale Tank TK-2435

Measuring Tank TK-2436

Dip Solution Storage Tanks TK-510 and TK-511

- 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:

Maintenance Welding

- 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 MBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 MBtu/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)].

Extruders used for the extrusion of metals, minerals, plastics, rubber, or wood, excluding extruders used in the manufacture of polymers, provided that volatile organic materials or class I or II substances subject to the requirements of Title VI of the CAA are not used as foaming agents or release agents or were not used as foaming agents in the case of extruders processing scrap material [35 IAC 201.210(a)(5)].

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

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

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

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

### 3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the

Permittee shall comply with the following requirements, as applicable:

- 3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.
- 3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.
- 3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

### 3.3 Addition of Insignificant Activities

- 3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).
- 3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.
- 3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
1	<b>Line 10 - Sodium Aluminate Production and Alum Storage</b>		
	Sodium Aluminate Cooker	Before 1970	None
	Alumina Hoppers 2 and 3		
	Cyclone A-CY-2 and A-CY-3		
2	<b>Reserved</b>		
3	<b>Reserved</b>		
4	<b>Line 11 - Impregnation</b>		
	Impregnation Tank 311	Before 1970	None
	Impregnation Tank 312		
	Impregnation Tank 313		
Kaiser Bin		Baghouse DC-301	
5	<b>Line 12 - Spray Drying</b>		
	Spray Dryer 2 and 3	Before 1970	None
	Cyclone 2 and 3		Electrostatic Precipitator
	Storage Bin #1		Baghouse DC-9
Storage Bin 672	Baghouse S-DC-7		
6	<b>Line 13 - Mixing/Extrusion/Calcining</b>		
	Intensive Mixer IM-1	Before 1972	Wet Scrubber SCR-3
	Conveyer 2		
	Spiral Elevators 1 and 2		Baghouse DC-6
	Natural Gas Fired Pre-Dryer CR-4		None
	Calciner CR-5		Scrubber S-SCR-4
	Screener		Baghouse DC-6
Powder Collection Drum			
7	<b>Line 13 - Holoflite Processing</b>		
	Holoflite Processors 1 and 2	Before 1972	Wet Scrubber SCR-1
	Holoflite Hot Oil Heaters 1 and 2		None
8	<b>Line 13 - Powder Collection System</b>		
	Alumina Storage Tank TK-9	Before 1972	Dust Collector DC-7
	Weigh Hopper		
	Cyclone 13		None
Recycled Bin	Dust Collector DC-6		
9	<b>Line 13 - Recycling System</b>		
	Hopper	Before 1972	Dust Collector N-DC-6
	Screener		None
Dry Grinder	Dust Collector N-DC-6		

Emission Unit	Description	Date Constructed	Emission Control Equipment
9 (Cont.)	<b>Line 13 - Recycling System</b>		
	Dry Fines Tank TK-333	Before 1972	Dust Collector N-DC-6
	Blue Fines Tank TK-332		Dust Collector N-DC-6
10	<b>Line 14 - Extrusion System</b>		
	Weigh Hopper 2	Before 1972	Baghouse S-BH-20
	Littleford Mixer		None
	Conveyers 1 and 2		Baghouse S-BH-22
	Spiral Elevator		Cyclone S-CYC-14
	Pre Dryer S-PD-1		
	Calciner		Scrubber S-SCR-4 and S-SCB-20A
	Screens 1 and 2		None
	Product Tote Bin		Baghouse S-BH-22
Recycle Drums			
10A	<b>Scrubber System (S-SCR-4)</b>		
	NO <sub>x</sub> Scrubber S-SCR-4	1998	None
11	<b>Line 14 - Recycle System</b>		
	Storage Bin B-1 and B-2	1974	None
	Screener		Baghouse S-B-26
Dry Grinder DG-20			
12	<b>Line 19 - Metals Makeup</b>		
	Formic Acid Storage Tank	1972	Scrubber S-PT-1
	Metals Solution Tanks TK-501 and TK-513		Rotoclone Scrubber S-SCR-5 and S-SCR-6
Drum Weigh Station	Baghouse DC-555		
13	<b>Line 19 - Soaks</b>		
	Base Hopper Loading Basket	1972	Baghouse DC-555
14	<b>Line 19 - Calciner System</b>		
	Calciner	1972	Scrubber SY-7
15	<b>Line 19 - Packaging</b>		
	Enclosed Spiral Elevator	1972	Baghouse S-DC-555
	Screener		
	Repackaging Station		
Recycle Drums			
16	<b>Line 20 - Mixing and Reaction</b>		
	Aluminum Chloride Reactor F-2103	September 1993	Acid Scrubber L-2109
	Feed Tank F-2119		
	Batch Weigh Tank F-2132		Ammonia Scrubber L-2107
	Ammonium Reactor F-2102		
	Gelation Tanks F-2111 and F-2112		Acid Scrubber L-2109
Hot Agar Tank F-2121			

Emission Unit	Description	Date Constructed	Emission Control Equipment
17	<b>Line 20 - Filter/Extrusion/Belt Drying</b>		
	Belt Dryer 1 Q-2101	September 1993	Baghouse Z-2134 A and B
	Vibrating Conveyer Z-2108		Baghouse Z-2134 C
	Hopper Z-2147		Ammonia Scrubber L-2107
	Belt Washer L-2103		Baghouse Z-2134 A and B
	Belt Dryer 2 Q-2102		Baghouse Z-2134 C
Portable Container			
18	<b>Line 20 - Slurry Rework</b>		
	Hopper	September 1993	Baghouse Z-2134 C
	Rework Slurry Tank F-2101		None
19	<b>Line 20 - HTU Drying</b>		
	Hopper	September 1993	Baghouse Z-2134 C
	Fill Conveyer		Ammonia Scrubber L-2107
	High Temperature Units (HTU) Q-2103, Q-2104 and Q-2105		
20	<b>Line 20 - Packaging</b>		
	Vibrating Conveyor Z-2127	September 1993	Baghouse Z-2133
	Screener Z-2128		
	Hopper Z-2130		
	Drum Filter		
21	<b>Line 20 - Waste Water Treatment</b>		
	Day Tank F-2169	September 1993	Acid Scrubber L-2109
	Nickel Chloride Holding Tank F-2106		Acid Scrubber L-2109
23	<b>Line 18 - Soaks</b>		
	Base Hopper	December 1995	Baghouse DC-556
	Basket Loader		Baghouse DC-556
	Dip Tanks TK-531 through TK-533		Scrubber S-PT-1
24	<b>Line 18 - Calcining System</b>		
	Feed Hopper	December 1995	Scrubber S-PT-1
	Feeder		Cyclone S-SC-1
	Calciner		Scrubber S-SCR-4 and Cyclone S-C4-501
25	<b>Line 18 - Packaging</b>		
	Recycle Packaging Station	December 1995	Baghouse DC-556
	Recycle Drums		
	Enclosed Spiral Elevator		
	Screener		
	Product Packaging Station		

Emission Unit	Description	Date Constructed	Emission Control Equipment
26	<b>Railcar/Truck Unloading</b>		
	Alumina Storage Tank	Before 1970	None
	Cyclones A-CY-1, A-CY-2 & A-CY-3		Baghouse A-DC-1
	Alumina Hoppers 2 & 3		None
	Alumina Storage Bin 3 & 4		Baghouse DC-3 & DC-4
	Rail Unloading Area		None
Truck Loading	None		
27	<b>Boilers</b>		
	Gas Boiler 1	Before 1970	None
	Gas Boiler 2		
	Gas Boiler 3		
Gas Boiler B-7			
28	<b>Storage Tanks</b>		
	Ammonia F-2113 (18,000 gallons)	September 1993	Ammonia Scrubber L-2107
	Acetic Acid F-2114 (12,000 gallons)		Acid Scrubber L-2109
	Hydrochloric Acid F-2115 (13,000 gallons)		
	Titanium Oxychloride T-603 (8,000 gallons)		
	Nickel Chloride F-2118 (6,000 gallons)		
	Nitric Acid F-2189 (7,000 gallons)	1996	
Formic Acid F-1891 (7,000 gallons)	1996	Scrubber S-PT-1	

## 5.0 OVERALL SOURCE CONDITIONS

### 5.1 Source Description

- 5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of NO<sub>x</sub> 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.

Compliance with this requirement is considered to be assured by the inherent nature of operations at this source, as demonstrated by historical operation.

- 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.

#### 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 Future Applicable Regulations

- 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.

5.3 Non-Applicability of Regulations of Concern

5.3.1 This permit is issued based on the source not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the source does not have a pollutant-specific emissions unit that uses an add-on control device to achieve compliance with an emission limitation or standard.

5.4 Source-Wide Operational and Production Limits and Work Practices

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

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	15.70
Sulfur Dioxide (SO <sub>2</sub> )	20.60
Particulate Matter (PM)	69.70
Nitrogen Oxides (NO <sub>x</sub> )	126.20
HAP, not included in VOM or PM	---
TOTAL	232.20

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 Production Lines

- a. Throughput of material for each production line, i.e. plant production records;
- b. Natural gas consumption for combustion units (ft<sup>3</sup>/mo and ft<sup>3</sup>/yr);
- c. A maintenance and repair log for each production line, listing each activity performed and date;
- d. The Permittee shall maintain records of annual aggregate CO, VOM, PM, SO<sub>2</sub> and NO<sub>x</sub> emissions from the production lines based upon operating hours, throughput and the applicable emission factors, with supporting calculations, to demonstrate compliance with Condition 5.5.1.

### 5.6.3 Records for Air Pollution Control Devices

- a. Results of weekly inspections;
- b. A maintenance and repair log for each air pollution control device, listing each activity performed and date;
- c. The Permittee shall maintain records of annual aggregate CO, VOM, PM, SO<sub>2</sub> and NO<sub>x</sub> emissions from the air pollution control devices upon based operating

hours and the applicable emission factors, with supporting calculations, to demonstrate compliance with Condition 5.5.1.

5.6.4 Records for Operating Scenarios

N/A

5.6.5 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 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 30 days of an exceedance of the limits in Conditions 5.5.1 or any Emission Limitations found in Sections 7.1.6 through 7.13.6. The notification shall include:
  - i. Identification of the limit that may have been exceeded.
  - ii. Duration of the possible exceedance.
  - iii. An estimate of the amount of emissions in excess of the applicable standard.
  - iv. A description of the cause of the possible exceedance.
  - v. When compliance was reestablished.

5.7.2 Annual Emissions Report

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

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

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.

- a. For the purpose of estimating VOM, PM, CO, SO<sub>2</sub> and NO<sub>x</sub> emissions from natural gas combustion units, process lines and air pollution control equipment, the current version(s) of USEPA's AP-42 emission factors is acceptable.
- b. For the purpose of estimating VOM emissions from the storage tanks, the most recent version of the program TANKS is acceptable.

## 6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

### 6.1 Description of ERMS

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

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

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

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

### 6.2 Applicability

This permit is issued based on this source not being a participating source in the Emissions Reduction Market System (ERMS), 35 IAC Part 205, pursuant to 35 IAC 205.200. This is based on the source's actual VOM emissions during the seasonal allotment period from May 1 through September 30 of each year

being less than 10 tons and the source's baseline emissions also being less than 10 tons.

### 6.3 Recordkeeping and Reporting

- a. The Permittee shall maintain the following records to allow the confirmation of actual VOM emissions during the seasonal allotment period:
  - i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, as specified in Sections 5 and 7 of this permit, as appropriate, to determine actual VOM emissions during the seasonal allotment period;
  - ii. Records of the VOM emissions, in tons, during the seasonal allotment period, with supporting calculations, for each individual emission unit or group of related emission units at the source, determined in accordance with the procedures specified in Sections 5 and 7 of this permit; and
  - iii. Total VOM emissions from the source, in tons, during each seasonal allotment period, which shall be compiled by November 30 of each year.
  
- b. In the event that the source's VOM emissions during the seasonal allotment period equal or exceed 10 tons, the source shall become a participating source in the ERMS and beginning with the following seasonal allotment period, shall comply with 35 IAC Part 205, by holding allotment trading units (ATUs) for its VOM emissions during each seasonal allotment period, unless the source obtains exemption from the ERMS by operating with seasonal VOM emissions of no more than 15 tons pursuant to a limitation applied for and established in its CAAPP permit.

7.0 UNIT SPECIFIC CONDITIONS

7.1 Line 10 - Sodium Aluminate Production and Alum Storage

7.1.1 Description

Water and caustic are added to the Sodium Aluminate Cooker in a batch process. A natural gas fired heater heats the mixture and alumina is fed from outside storage to the cooker/reactor. From the cooker, sodium aluminate is pumped to a storage tank that in turn feeds the Batches process.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
1	<b>Line 10 - Sodium Aluminate Production and Alum Storage</b>	
	Sodium Aluminate Cooker	None
	Alumina Hoppers 2 and 3	
	Cyclone A-CY-2 and A-CY-3	

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected process" for the purpose of these unit-specific conditions, is the sodium aluminate production line 10 described in Condition 7.1.1 and 7.1.2.
- b. The affected process is subject to the emission limits identified in Condition 5.2.2.
- c. The affected line is subject to 35 IAC 212.322, which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 10.2) [35 IAC 212.322(a)].

- d. The affected line is subject to 35 IAC 214.301, which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

7.1.4 Non-Applicability of Regulations of Concern

None

7.1.5 Operational and Production Limits and Work Practices

None

7.1.6 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.

7.1.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

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 process to demonstrate compliance with Conditions 5.5.1, 7.1.3 and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

None

7.1.10 Reporting Requirements

The Permittee shall follow the general reporting requirements of Condition 5.7.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.1.12 Compliance Procedures

- a. Compliance with the emissions limits in Condition 5.5.1 and 7.1.6 shall be based on the recordkeeping requirements in Condition 5.6.

7.2 Reserved

7.3 Reserved

7.4 Line 12 - Spray Drying

7.4.1 Description

The spray dryers are natural gas fired units which dewater/dry the formulated alumina from storage tanks, batches or filters processes. From the dryers the material is transferred to storage bins from where it may be subsequently fed to line 13 or 14, or it may be dropped to the slurry pot for water spray and additional filtration depending on the recipe.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
5	<b>Line 12 - Spray Drying</b>	
	Spray Dryer 2 and 3	None
	Cyclone 2 and 3	Electrostatic Precipitator
	Storage Bin #1	Baghouse DC-9
	Storage Bin 672	Baghouse S-DC-7

7.4.3 Applicability Provisions and Applicable Regulations

- a. The "affected line" for the purpose of these unit-specific conditions, is the spray drying line 12 described in Condition 7.4.1 and 7.4.2.
- b. The affected line is subject to the emission limits identified in Condition 5.2.2.
- c. The affected line is subject to 35 IAC 212.322, which provides that:
 

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 10.2) [35 IAC 212.322(a)].
- d. The affected line is subject to 35 IAC 214.301, which provides that:
 

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

7.4.4 Non-Applicability of Regulations of Concern

None

7.4.5 Operational and Production Limits and Work Practices

None

7.4.6 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.

7.4.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

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 line to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

None

7.4.10 Reporting Requirements

The Permittee shall follow the General Reporting Requirements of Condition 5.7.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

- a. Compliance with 7.4.3(c) and (d) is consider to be assured based on the normal work practices and maintenance activities inherent in operation of the affected line.

7.5 Line 13 - Specialty Catalyst Extrusion

7.5.1 Description

Material is pumped in batches from the filtering operation to a feed tank from which material is transferred to either line 18, line 19 or packaging as a final product. Extrusion aid such as molydisulfide, alginates or starches may be added to the process. Dry material/dust and off-sized product is collected, screened, ground and recycled to the beginning of this production line or to lines 11 and 12.

The calciner is controlled by a selective catalytic reduction (SCR) device and pre-filter when nitric acid is used. When nitric acid is not used, a cyclone and wet scrubber controls the calciner. The SCR is also used to scrub NO<sub>x</sub> emitted from either calciner from line 14 or 18 when NO<sub>x</sub> producing raw materials are used. Overall no more than two of the three calciners will be using NO<sub>x</sub> producing materials at any one time.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
6	<b>Line 13 - Mixing/Extrusion/Calcining</b>	
	Intensive Mixer IM-1	Wet Scrubber SCR-3
	Conveyer 2	Baghouse DC-6
	Spiral Elevators 1 and 2	
	Natural Gas Fired Pre-Dryer CR-4	None
	Calciner CR-5	Scrubber S-SCR-4
	Screeener	Baghouse DC-6
	Powder Collection Drum	
7	<b>Line 13 - Holoflite Processing</b>	
	Holoflite Processors 1 and 2	Wet Scrubber SCR-1
	Holoflite Hot Oil Heaters 1 and 2	None
8	<b>Line 13 - Powder Collection System</b>	
	Alumina Storage Tank TK-9	Dust Collector DC-7
	Weigh Hopper	
	Cyclone 13	None
Recycled Bin	Dust Collector DC-6	

Emission Unit	Description	Emission Control Equipment
9	<b>Line 13 - Recycling System</b>	
	Hopper	Dust Collector N-DC-6
	Screeener	None
	Dry Grinder	Dust Collector N-DC-6
	Dry Fines Tank TK-333	Dust Collector N-DC-6
	Blue Fines Tank TK-332	Dust Collector N-DC-6

7.5.3 Applicability Provisions and Applicable Regulations

- a. The "affected line" for the purpose of these unit-specific conditions, is the line 13 describe in Condition 7.5.1 and 7.5.2.
- b. The affected line is subject to the emission limits identified in Condition 5.2.2.
- c. The affected line is subject to 35 IAC 212.322, which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 10.2) [35 IAC 212.322(a)].

- d. The affected line is subject to 35 IAC 214.301, which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

7.5.4 Non-Applicability of Regulations of Concern

None

7.5.5 Operational and Production Limits and Work Practices

None

7.5.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected line is subject to the following:

(See also Condition 7.13 - Scrubber System)

Emissions from the affected line's Pre Dryer CR-4 shall not exceed the following limits:

Pollutant	Annual Emissions (Tons/yr)
PM	0.2
NO <sub>x</sub>	4.6
VOM	0.1
CO	1.2

These limits are based on the addition of a maximum of 5.1 Lbs/hr of molybdenum sulfide into Intensive Mixer IM-1 for a maximum of 3,360 hr/yr and use of an additional maximum of 7.8 mmBtu/hr (from natural gas combustion) in Pre Dryer CR-4 for a maximum of 8,400 hr/yr. 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 72100343, 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 PSD rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.5.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

7.5.8 Monitoring Requirements

None

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 line to demonstrate compliance with

Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

- a. Natural gas consumption for the Pre Dryer in cubic feet per month and year.

7.5.10 Reporting Requirements

The Permittee shall follow the General Reporting Requirements of Condition 5.7.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

- a. Compliance with 7.5.3(c) and (d) is considered to be assured based on the normal work practices and maintenance activities inherent in operation of the affected line.
- b. Compliance with Condition 7.5.6 shall be determined using the recordkeeping requirements of Condition 7.5.9 and the appropriate emission factors from the latest version of USEPA's AP-42.

7.6 Line 14 - Catalyst Powder Production

7.6.1 Description

Alumina hydrate from outside storage is batch weighed and mixed with water, recycled material and extrusion aids. It is then continuously shaped, dried and calcined. This intermediate product is subsequently transferred to line 18 or line 19. Dry material/dust and off-sized product is collected, screened, ground and recycled to the weigh hopper at the beginning of this production line.

Extrusion aids may include inorganic acids, alginates or starches. Shaped intermediate product from line 13 may also be added for higher temperature calcining. When using materials that produce NO<sub>x</sub> in the calciner, it will be vented to the NO<sub>x</sub> scrubber on line 13.

7.6.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
10	<b>Line 14 - Extrusion System</b>	
	Weigh Hopper 2	Baghouse S-BH-20
	Littleford Mixer	None
	Conveyers 1 and 2	Baghouse S-BH-22
	Spiral Elevator	
	Pre Dryer S-PD-1	Cyclone S-CYC-14
	Calciner	Scrubber S-SCR-4 and S-SCB-20A
	Screens 1 and 2	None
	Product Tote Bin	Baghouse S-BH-22
	Recycle Drums	
11	<b>Line 14 - Recycle System</b>	
	Storage Bin B-1 and B-2	None
	Screener	
	Dry Grinder DG-20	Baghouse S-B-26

7.6.3 Applicability Provisions and Applicable Regulations

- a. The "affected line" for the purpose of these unit-specific conditions, is the line 14 described in Condition 7.6.1 and 7.6.2.
- b. The affected line is subject to the emission limits identified in Condition 5.2.2.
- c. The affected line is subject to 35 IAC 212.321(a), 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 10.1) [35 IAC 212.321(a)].

- d. The affected line is subject to 35 IAC 214.301, which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

7.6.4 Non-Applicability of Regulations of Concern

None

7.6.5 Operational and Production Limits and Work Practices

None

7.6.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected line is subject to the following:

(See also Condition 7.13 - Scrubber System)

- a. Operations and emissions from the calciner gas fired combustion unit shall not exceed the following limits:

Firing Rate (mmBtu/Hr)	Emissions			
	NO <sub>x</sub>		CO	
	Lb/Mo	Tons/Yr	Lb/Mo	Tons/Yr
5.0	365	2.19	80	0.48

These limits are based on standard emission factors, the fuel maximum firing rate, and maximum hours of operation. [T1].

- b. Operations and emissions from fuel combustion from the Proctor-Schwartz Dryer shall not exceed the following limits:

Firing Rate (mmBtu/Hr)	Pollutant	Emissions	
		Lb/Hr	Ton/Yr
2.4	NO <sub>x</sub>	0.24	1.05
	PM	0.1	0.44

These limits are based on standard emission factors and the fuel(s), maximum firing rate(s), and maximum hours of operation [T1].

The above limitations were established in Permit 74010113, 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].

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].

#### 7.6.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

#### 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 line to demonstrate compliance with Conditions 5.5.1 and 7.6.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Process weight rate of Product A1 and A2, Rotex (M-1973), dry grinder, 2 weigh hoppers in tons/month and tons/year.
- b. Gas consumption by calciner combustion unit and Proctor-Schwartz dryer in ft<sup>3</sup>/month and ft<sup>3</sup>/year.
- c. CO, NO<sub>x</sub> and SO<sub>2</sub> emission calculations from the calciner process and calciner combustion unit in lbs/month and tons/year.
- d. Particulate matter emissions from Rotex dry grinder, 2 weigh hoppers, mixer, 2 extruders and 3 conveyors and bin vent (S-BH 21) in lbs/month and tons/year.

7.6.10 Reporting Requirements

The Permittee shall follow the General Reporting Requirements of Condition 5.7.

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.6.12 Compliance Procedures

- a. Compliance with 7.6.3(c) and (d) is considered to be assured based on the normal work practices and maintenance activities inherent in operation of the affected line.
- b. Compliance with Condition 7.6.6 shall be determined using the recordkeeping requirements of Condition 7.6.9 and the appropriate emission factors from the latest version of USEPA's AP-42.

7.7 Line 19 - Catalyst Impregnation

7.7.1 Description

The dipped basket delivers base to the calciner feeder. The feeder vibrates the soaked base into the calciner. After discharging from the calciner, the material is lifted via a spiral elevator (vented to the Soaks baghouse), to the screener platform. The screener sieves the soaked base into one of three categories: undersize product, oversize product or product. The oversized product is recycled in another area. The baghouse drum is located outside the building housing this production line. These emission units are controlled by a wet scrubber system.

7.7.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
12	<b>Line 19 - Metals Makeup</b>	
	Formic Acid Storage Tank	Scrubber S-PT-1
	Metals Solution Tanks TK-501 and TK-513	Rotoclone Scrubber S-SCR-5 and S-SCR-6
	Drum Weigh Station	Baghouse DC-555
13	<b>Line 19 - Soaks</b>	
	Base Hopper	Baghouse DC-555
	Loading Basket	
14	<b>Line 19 - Claciner System</b>	
	Calciner	Scrubber SY-7
15	<b>Line 19 - Packaging</b>	
	Enclosed Spiral Elevator	Baghouse S-DC-555
	Screener	
	Repackaging Station	
	Recycle Drums	

7.7.3 Applicability Provisions and Applicable Regulations

- a. The "affected line" for the purpose of these unit-specific conditions, is the line 19 described in Condition 7.7.1 and 7.7.2.
- b. The affected line is subject to the emission limits identified in Condition 5.2.2.
- c. The affected line is subject to 35 IAC 212.322, which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process unit for which construction or modification commenced prior to April

14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 10.2) [35 IAC 212.322(a)].

7.7.4 Non-Applicability of Regulations of Concern

None

7.7.5 Operational and Production Limits and Work Practices

None

7.7.6 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.

7.7.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

7.7.8 Monitoring Requirements

None

7.7.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected line to demonstrate compliance with Conditions 5.5.1 and 7.7.6, pursuant to Section 39.5(7)(b) of the Act:

None

7.7.10 Reporting Requirements

The Permittee shall follow the General Reporting Requirements of Condition 5.7.

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.7.12 Compliance Procedures

- a. Compliance with 7.7.3(c) and (d) is consider to be assured based on the normal work practices and maintenance activities inherent in operation of the affected line.
- b. Compliance with Condition 7.7.6 shall be determined using the recordkeeping requirements of Condition 7.7.9 and the appropriate emission factors from the latest version of USEPA's AP-42.

7.8 Line 20 - Cogel

7.8.1 Description

The Cogel process is designed to produce catalyst used by the petroleum industry as a hydrocracking catalyst agent. The catalyst is manufactured by precipitation (or gelation) from an acid solution mixture and formed in a series of drying and extrusion steps. Major steps include raw material and rework preparation, precipitation, gelation, hot aging filtration first extrusion, first drying second extrusion, washing, steaming, second drying high temperature trying, and packaging. Raw material used include: ammonium hydroxide, ammonium nitrate, titanium oxychloride solution, hydrochloric acid, alumina trihydrate, sodium tungstate, zeolite, neodol, rework (collected process waste) and additives. Air pollution control devices and wastewater treatment are also included in this production line.

7.8.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
16	<b>Line 20 - Mixing and Reaction</b>	
	Aluminum Chloride Reactor F-2103	Acid Scrubber L-2109
	Feed Tank F-2119	
	Batch Weigh Tank F-2132	
	Ammonium Reactor F-2102	Ammonia Scrubber L-2107
	Gelation Tanks F-2111 and F-2112	Acid Scrubber L-2109
Hot Agar Tank F-2121		
17	<b>Line 20 - Filter/Extrusion/Belt Drying</b>	
	Belt Dryer 1 Q-2101	Baghouse Z-2134 A and B
	Vibrating Conveyer Z-2108	Baghouse Z-2134 C
	Hopper Z-2147	
	Belt Washer L-2103	Ammonia Scrubber L-2107
	Belt Dryer 2 Q-2102	Baghouse Z-2134 A and B
Portable Container	Baghouse Z-2134 C	
18	<b>Line 20 - Slurry Rework</b>	
	Hopper	Baghouse Z-2134 C
	Rework Slurry Tank F-2101	None
19	<b>Line 20 - HTU Drying</b>	
	Hopper	Baghouse Z-2134 C
	Fill Conveyer	
	High Temperature Units (HTU) Q-2103, Q-2104 and Q-2105	Ammonia Scrubber L-2107

Emission Unit	Description	Emission Control Equipment
20	<b>Line 20 - Packaging</b>	
	Vibrating Conveyor Z-2127	Baghouse Z-2133
	Screener Z-2128	
	Hopper Z-2130	
Drum Filter		
21	<b>Line 20 - Waste Water Treatment</b>	
	Day Tank F-2169	Acid Scrubber L-2109
	Nickel Chloride Holding Tank F-2106	Acid Scrubber L-2109

7.8.3 Applicability Provisions and Applicable Regulations

- a. The "affected line" for the purpose of these unit-specific conditions, is the line 20 described in Condition 7.8.1 and 7.8.2.
- b. The affected line is subject to the emission limits identified in Condition 5.2.2.
- c. The affected line is subject to 35 IAC 212.321(a), 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 10.1) [35 IAC 212.321(a)].

- d. The affected line is subject to 35 IAC 214.301, which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

7.8.4 Non-Applicability of Regulations of Concern

None

7.8.5 Operational and Production Limits and Work Practices

None

7.8.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected line is subject to the following:

- a. Emissions from the ammonia scrubber L-2107 shall not exceed the following limits:

Pollutant	Emissions	
	Lb/hr	Tons/yr
VOM	0.1	0.44
PM	0.1	0.44

- b. Emissions from the acid scrubber L-2109 shall not exceed the following limits:

Pollutant	Emissions	
	Lb/hr	Tons/yr
VOM	0.1	0.44
PM	0.1	0.44

- c. Emissions from the calcined dust baghouse Z-2133 shall not exceed the following limits:

Pollutant	Emissions	
	Lb/hr	Tons/yr
VOM	0.1	0.44
PM	0.1	0.44

- d. Emissions from the uncalcined dust baghouse Z-2134 C shall not exceed the following limits:

Pollutant	Emissions	
	Lb/hr	Tons/yr
VOM	0.1	0.44
PM	0.1	0.44

- e. Emissions from the uncalcined rework baghouses Z-2134 A and B shall not exceed the following limits:

Pollutant	Emissions	
	Lb/hr	Tons/yr
PM	0.1	0.44

- f. Emissions from the Dryers Q-2103, Q-2104 and Q-2105 shall not exceed the following limits:

Pollutant	Emissions		
	Each Dryer		Total
	Lb/hr	Tons/yr	Tons/yr
NO <sub>x</sub>	0.4	1.7	5.1
CO	0.1	0.44	1.3

These limits are based on standard emission factors for the combustion of natural gas for nitrogen oxide (NO<sub>x</sub>) emissions and carbon monoxide (CO) emissions. 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 (Condition 7.8.6(a) through (f)) were established in Permit 93070015, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.8.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

7.8.8 Monitoring Requirements

None

7.8.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected line to demonstrate compliance with Conditions 5.5.1 and 7.8.6, pursuant to Section 39.5(7)(b) of the Act:

None

7.8.10 Reporting Requirements

The Permittee shall follow the General Reporting Requirements of Condition 5.7.

7.8.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

#### 7.8.12 Compliance Procedures

- a. Compliance with 7.8.3(c) and (d) is considered to be assured based on the normal work practices and maintenance activities inherent in operation of the affected line.
- b. Compliance with Condition 7.8.6 shall be determined using the recordkeeping requirements of Condition 7.8.9 and the appropriate emission factors from the latest version of USEPA's AP-42.

7.9 Line 18 - Calcining System

7.9.1 Description

The dipped basket delivers base to the calciner feeder. The feeder vibrates the soaked base into the calciner. After discharging from the calciner, the material is lifted via a spiral elevator (vented to the Soaks baghouse), so the screener platform. The screener sieves the soaked base into one of three categories: undersize product, oversize product or product. The oversized product is recycled in another area. The baghouse drum is located outside the building housing this production line. These emission units are controlled by the wet scrubber system in production line 19. when using products that produce NO<sub>x</sub> in the calciner, it will be vented to the NO<sub>x</sub> scrubber (SCR) of line 13.

7.9.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
23	<b>Line 18 - Soaks</b>	
	Base Hopper	Baghouse DC-556
	Basket Loader	Baghouse DC-556
	Dip Tanks TK-531 through TK-533	Scrubber S-PT-1
24	<b>Line 18 - Calcining System</b>	
	Feed Hopper	Scrubber S-PT-1
	Feeder	Cyclone S-SC-1
	Calciner	Scrubber S-SCR-4 and Cyclone S-C4-501
25	<b>Line 18 - Packaging</b>	
	Recycle Packaging Station	Baghouse DC-556
	Recycle Drums	
	Enclosed Spiral Elevator	
	Screener	
Product Packaging Station		

7.9.3 Applicability Provisions and Applicable Regulations

- a. The "affected line" for the purpose of these unit-specific conditions, is the line 18 described in Condition 7.9.1 and 7.9.2.
- b. The affected line is subject to the emission limits identified in Condition 5.2.2.
- c. The affected line is subject to 35 IAC 212.321(a), 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 10.1) [35 IAC 212.321(a)].

- d. The affected line is subject to 35 IAC 214.301, which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

7.9.4 Non-Applicability of Regulations of Concern

None

7.9.5 Operational and Production Limits and Work Practices

None

7.9.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected line is subject to the following:

(See also Condition 7.13 - Scrubber System)

Emissions and operation of the affected line shall not exceed the following limits:

Firing Rate (mmBtu/Hr)	Aluminum Oxide Production Rate (lb/hr)	Pollutant	Emissions	
			Lb/hr	Ton/yr
2.5	900	NO <sub>x</sub>	0.25	1.05
		CO	0.05	0.21
		PM	0.97	4.58

These limits are based on the maximum production rate 8760 hours of operation per year, standard emission factors for natural gas consumption given by AP-42, and allowable emissions of particulate matter pursuant to 35 IAC 212.321. 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 74030118, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.9.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

7.9.8 Monitoring Requirements

None

7.9.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected line to demonstrate compliance with Conditions 5.5.1 and 7.9.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Production rate (lb/mo);
- b. Natural gas consumption (ft<sup>3</sup>/year)

7.9.10 Reporting Requirements

The Permittee shall follow the General Reporting Requirements of Condition 5.7.

7.9.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.9.12 Compliance Procedures

- a. Compliance with 7.9.3(c) and (d) is considered to be assured based on the normal work practices and maintenance activities inherent in operation of the affected line.
- b. Compliance with Condition 7.9.6 shall be determined using the recordkeeping requirements of Condition 7.9.9 and the appropriate emission factors from the latest version of USEPA's AP-42.

7.10 Railcar/Truck Unloading

7.10.1 Description

Aluminum oxide is received by railcar/truck and conveyed to an outside storage bin through a collection cyclone via an air system. Excess dust is captured in the baghouse, which also serves when aluminum oxide is conveyed to production.

7.10.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
26	<b>Railcar/Truck Unloading</b>	
	Alumina Storage Tank	None
	Cyclones A-CY-1, A-CY-2 & A-CY-3	Baghouse A-DC-1
	Alumina Hoppers 2 & 3	None
	Alumina Storage Bin 3 & 4	Baghouse DC-3 & DC-4
	Rail Unloading Area Truck Loading	None

7.10.3 Applicability Provisions and Applicable Regulations

- a. The "affected process" for the purpose of these unit-specific conditions, is the railcar/truck unloading process described in Condition 7.10.1 and 7.10.2.
- b. The affected process is subject to the emission limits identified in Condition 5.2.2.
- c. The affected process is subject to 35 IAC 212.322, which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 10.2) [35 IAC 212.322(a)].

7.10.4 Non-Applicability of Regulations of Concern

None

7.10.5 Operational and Production Limits and Work Practices

None

7.10.6 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.

7.10.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

7.10.8 Monitoring Requirements

None

7.10.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected process to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

- a. Usage rates of aluminum oxide (ton/mo); and
- b. Annual aggregate PM emissions from the affected process based on throughput and the applicable emission factors, with supporting calculations.

7.10.10 Reporting Requirements

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

- a. Emissions of CO, VOM, PM, SO<sub>2</sub> and NO<sub>x</sub> from the affected tanks in excess of the limits specified in Condition 5.5.1.

7.10.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.10.12 Compliance Procedures

- a. Compliance with Condition 7.10.3(c) and 7.10.6 shall be determined using the recordkeeping requirements of

Condition 7.10.9 and the appropriate emission factors from the latest version of USEPA's AP-42.

7.11 Boilers

7.11.1 Description

Natural gas fired boilers used for process steam. Boiler 1 has a maximum firing rate of 8.5 mmBtu/hr and Boilers 2, 3 and B-7 have a maximum firing rate of 26.6 mmBtu/hr.

7.11.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
27	<b>Boilers</b>	
	Gas Boiler 1	None
	Gas Boiler 2	
	Gas Boiler 3	
	Gas Boiler B-7	

7.11.3 Applicability Provisions and Applicable Regulations

- a. The "affected boilers" for the purpose of these unit-specific conditions, are the gas boilers described in Condition 7.11.1 and 7.11.2.
- b. The affected boilers are subject to the emission limits identified in Condition 5.2.2.
- c. Affected boilers 2, 3 and B-7 are subject to 35 IAC 216.121:

No person shall cause or allow 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) to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].

7.11.4 Non-Applicability of Regulations of Concern

- a. The affected boilers are not subject to NSPS, 40 CFR 60 Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units, applies to units constructed, reconstructed, or modified after June 9, 1989. All boilers from were constructed prior to June 9, 1989.

7.11.5 Operational and Production Limits and Work Practices

- a. Natural gas shall be the only fuel fired in the affected boilers.
- b. At all times the Permittee shall to the extent practicable maintain and operate the affected boilers in a manner consistent with good air pollution control practice for minimizing emissions.

7.11.6 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.

7.11.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

7.11.8 Monitoring Requirements

None

7.11.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected boilers to demonstrate compliance with Conditions 5.5.1 and 7.11.5, pursuant to Section 39.5(7)(b) of the Act:

- a. Natural gas usage for the affected boilers (ft<sup>3</sup>/yr);
- b. Annual aggregate CO, VOM, PM, SO<sub>2</sub> and NO<sub>x</sub> emissions from the affected boilers, based on fuel consumption and the applicable emission factors, with supporting calculations.

7.11.10 Reporting Requirements

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

- a. Emissions of CO, VOM, PM, SO<sub>2</sub> and NO<sub>x</sub> from the affected boilers in excess of the limits specified in Condition 5.5.1.

7.11.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.11.12 Compliance Procedures

- a. Compliance with Condition 7.11.3(c) is assumed to be achieved by the work practices inherent in operation of a natural gas-fired boiler (Condition 7.11.5), thus no compliance procedures are set in this permit addressing this regulation.
- b. Compliance with the Condition 5.5.1 shall be based on the recordkeeping requirements in Condition 7.11.9 and the following representative emission factors and formulas listed below:

Pollutant	Emission Factor (lb/million scf)
NO <sub>x</sub>	100
CO	84
PM	7.6
VOM	5.5
SO <sub>2</sub>	0.6

The above standard emission factors are for small boilers (less than 100 mmBtu) combusting natural gas, as found in AP-42, Chapter 1.4, Tables 1.4-1 and 1.4-2.

7.12 Storage Tanks

7.12.1 Description

Storage tank farm used to hold various chemicals used at the facility.

7.12.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
28	<b>Storage Tanks</b>	
	Ammonia F-2113 (18,000 gallons)	Ammonia Scrubber L-2107
	Acetic Acid F-2114 (12,000 gallons)	Acid Scrubber L-2109
	Hydrochloric Acid F-2115 (13,000 gallons)	
	Titanium Oxychloride T-603 (8,000 gallons)	
	Nickel Chloride F-2118 (6,000 gallons)	
	Nitric Acid F-2189 (7,000 gallons)	
	Formic Acid F-1891 (7,000 gallons)	Scrubber S-PT-1

7.12.3 Applicability Provisions and Applicable Regulations

- a. The "affected tanks" for the purpose of these unit-specific conditions, are the storage tanks described in Condition 7.12.1 and 7.12.2.
- b. The affected tanks are subject to the emission limits identified in Condition 5.2.2.
- c. The affected tanks are subject to 35 IAC 214.301, which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

7.12.4 Non-Applicability of Regulations of Concern

- a. Except as provided in Condition 7.12.9(a) (see also 40 CFR 60.116(b)) storage vessels with design capacity less than 75 m<sup>3</sup> are exempt from the General Provisions of the NSPS and from the provisions of 40 CFR 60 Subpart Kb [40 CFR 60.110b(b)].
- b. The affected tanks are not subject to the limitations of 35 IAC 218.120, Control Requirements for Storage

Containers of VOL, pursuant to 35 IAC 218.119, because the material stored in the affected tank has a maximum true vapor pressure of less than 0.5 psia and the capacity is less than 151 m<sup>3</sup> (40,000 gal).

- c. The affected tanks are not subject to the requirements of 35 IAC 218.121, Storage Containers of VPL, pursuant to 35 IAC 218.123(a)(2), which exempts stationary storage tanks with a capacity less than 151.42 m<sup>3</sup> (40,000 gal) and pursuant to 35 IAC 218.123(a)(6), which exempts stationary storage tanks in which volatile petroleum liquid is not stored.
- d. The affected tanks are not subject to the requirements of 35 IAC 218.122, Loading Operations, because pursuant to 35 IAC 218.122(c), if no odor nuisance exists the limitations of this 35 IAC 218.122 shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).

7.12.5 Operational and Production Limits and Work Practices

None

7.12.6 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.

7.12.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

7.12.8 Monitoring Requirements

None

7.12.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected tank to demonstrate compliance with Conditions 5.5.1 and 7.1.3, pursuant to Section 39.5(7)(b) of the Act:

- a. The owner or operator of each storage vessel for which construction, reconstruction, or modification

is commenced after July 23, 1984 with a design capacity greater than or equal to 40 m<sup>3</sup>, but less than 75 m<sup>3</sup> shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Each storage vessel with a design capacity less than 75 m<sup>3</sup> is subject to no other provision of 40 CFR 60 Subpart Kb other than those required by this paragraph. This record shall be kept for the life of the source [40 CFR 60.110b(a), 60.116b(a), and 60.116b(b)].

- b. The throughput of the affected tanks in lbs/month and lbs/year.
- c. Annual aggregate CO, VOM, PM, SO<sub>2</sub> and NO<sub>x</sub> emissions from the affected tanks.

#### 7.12.10 Reporting Requirements

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

- a. Emissions of CO, VOM, PM, SO<sub>2</sub> and NO<sub>x</sub> from the affected tanks in excess of the limits specified in Condition 5.5.1.

#### 7.12.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

#### 7.12.12 Compliance Procedures

- a. For the purpose of estimating VOM emissions from storage tanks, the most current version of the USEPA TANKS program is acceptable.

7.13 Scrubber System

7.13.1 Description

NO<sub>x</sub> scrubber system used to control the calciners from line 13, line 14 and line 18, when NO<sub>x</sub> producing raw materials are used. Overall no more than two of the three calciners will be using NO<sub>x</sub> producing materials at any one time.

7.13.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
10A	<b>Scrubber System (S-SCR-4)</b>	
	NO <sub>x</sub> Scrubber S-SCR-4	None

7.13.3 Applicability Provisions and Applicable Regulations

- a. The "affected scrubber" for the purpose of these unit-specific conditions, is the scrubber system described in Condition 7.13.1 and 7.13.2.
- b. The affected scrubber is subject to the emission limits identified in Condition 5.2.2.
- c. The affected scrubber is subject to 35 IAC 214.301, which provides that:  
  
No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

7.13.4 Non-Applicability of Regulations of Concern

None

7.13.5 Operational and Production Limits and Work Practices

- a. NO<sub>x</sub> emitting production runs shall not be run on more than 2 calciners at any one time.

7.13.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected scrubber is subject to the following:

- a. Emissions from the affected scrubber with built in pre filter (S-SCR-4) shall not exceed the following limits:

Pollutant	Emissions	
	Lb/hr	Ton/yr
NO <sub>x</sub>	2.0	8.76
VOM	0.4	1.75
SO <sub>2</sub>	3.0	13.2
PM	0.1	0.44

These limits are based on maximum hours of operation (8,760 hours per year) and information provided by the applicant. 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 98060033, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

#### 7.13.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The Illinois EPA may provide additional time for the performance on these tests upon written request by the Permittee.

#### 7.13.8 Monitoring Requirements

None

#### 7.13.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected scrubber to demonstrate compliance with Condition 5.5.1, 7.13.3 and 7.13.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Operating hours of the affected scrubber as well as which calciner(s) are being vented to the scrubber.
- b. Weekly inspection results; and
- c. A maintenance and repair log for the affected scrubber, listing each activity performed and date.

#### 7.13.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of AN/THE affected VARIABLE 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. Emissions of CO, VOM, PM, SO<sub>2</sub> and NO<sub>x</sub> from the affected scrubber in excess of the limits specified in Conditions 5.5.1 and 7.13.6, based on the 12 month rolling period.

#### 7.13.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

#### 7.13.12 Compliance Procedures

- a. Compliance with Condition 7.13.3(c) and 7.13.6 shall be determined using the recordkeeping requirements of Condition 7.13.9 and the appropriate emission factors from the latest version of USEPA's AP-42.

## 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 December 11, 2002 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

### 8.2 Applicability of Title IV Requirements (Acid Deposition Control)

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

### 8.3 Emissions Trading Programs

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

### 8.4 Operational Flexibility/Anticipated Operating Scenarios

#### 8.4.1 Changes Specifically Addressed by Permit

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

#### 8.4.2 Changes Requiring Prior Notification

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

- a. The changes do not violate applicable requirements;

- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
  - i. Describe the physical or operational change;
  - ii. Identify the schedule for implementing the physical or operational change;
  - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
  - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
  - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

#### 8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

## 8.6 Reporting Requirements

### 8.6.1 Monitoring Reports

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

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

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

### 8.6.2 Test Notifications

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

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and

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

#### 8.6.3 Test Reports

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

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

#### 8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
  - i. Illinois EPA - Air Compliance Section  
  
Illinois Environmental Protection Agency  
Bureau of Air  
Compliance Section (MC 40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276
  - ii. Illinois EPA - Air Regional Field Office  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

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

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

iv. USEPA Region 5 - Air Branch

USEPA (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].

10.1 Attachment 1 Emissions of Particulate Matter from New Process Emission Units

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

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

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

where:

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

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

	Metric	English
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):

	Metric	English
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 or Modification Commenced On or After April 19, 1972 [35 IAC 212.321(c)]:

Metric		English	
P	E	P	E
Mg/hr	kg/hr	Ton/hr	lb/hr
0.05	0.25	0.05	0.55

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

10.2 Attachment 2 Emissions of Particulate Matter from Existing Process Emission Units

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

- a. 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 at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 [35 IAC 212.322(a)].
- b. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.321 shall be determined by using the equation [35 IAC 212.322(b)]:

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

where:

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

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

	Metric	English
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 rate in excess of 27.2 Mg/hr (30 Ton/hr):

	Metric	English
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 [35 IAC 212.322(c)]:

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

10.3 Attachment 3 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: \_\_\_\_\_

#### 10.4 Attachment 4 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;
  - Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits; or
  - Incorporates into the CAAPP permit revised limitations or other requirements resulting from the application of an approved economic incentives rule, marketable permits rule, or generic emissions trading rule.
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; and
- Are not required to be processed as a significant permit modification.

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 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
- 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.

10.6 Attachment 6 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 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.

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

MVH:psj