

217/782-2113

RENEWAL
TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT¹

PERMITTEE:

Caterpillar, Inc.
Attn.: Gerald Palmer
Box 348 Route 31
Aurora, Illinois 60507

I.D. No.: 093807AAB
Application No.: 95120094

Date Received: March 3, 2003

Date Issued:

Expiration Date¹:

Operation of: Heavy Off-Highway Equipment Manufacturing
Source Location: Route 31, Aurora, Kendall County
Responsible Official: Alan J. Rassi, Vice President - General

This permit is hereby granted to the above-designated Permittee to OPERATE a Heavy Off-Highway Equipment Manufacturing Plant, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

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

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

DES:LAK:jar

cc: Illinois EPA, FOS, Region 1
CES
Lotus Notes

¹ This permit contains terms and conditions that address the applicability, and, if determined applicable, substantive requirements of Title I of the Clean Air Act (CAA) and regulations promulgated thereunder, including 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and 35 IAC Part 203, Major Stationary Sources Construction and Modification. The authority for these provisions is found in these regulations and in the general authority provided to the Illinois EPA by Section 9.1 of the Environmental Protection Act (Act) and Sections 39(a) and 39.5(7)(a) of the Act, which authorize the Illinois EPA to include conditions in permits that are required to accomplish the purposes of the Act. Any such terms and conditions are specifically identified within this permit as T1 conditions. These terms and conditions continue in effect as provided by Condition 8.7 of this permit, notwithstanding the expiration date specified above, as their authority derives from Title I, as well as from Title V of the CAA.

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1.0 SOURCE IDENTIFICATION

1.1 Source

Caterpillar, Inc.
Route 31
Aurora, Illinois 60507
708/859-5417

I.D. No.: 093807AAB
County: Kendall
Standard Industrial Classification: 3531, Construction Machinery &
Equipment

1.2 Owner/Parent Company

Caterpillar, Inc.
Box 348 Route 31
Aurora, Illinois 60507

1.3 Operator

Caterpillar, Inc.
Box 348 Route 31
Aurora, Illinois 60507

Ann Hastert
630/859-5417

2.0 LIST OF ABBREVIATIONS AND ACRONYMS COMMONLY USED

| | |
|------------------|--|
| ACMA | Alternative Compliance Market Account |
| Act | Illinois Environmental Protection Act [415 ILCS 5/1 et seq.] |
| AP-42 | Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711 |
| ATU | Allotment Trading Unit |
| BACT | Best Available Control Technology |
| BAT | Best Available Technology |
| CAA | Clean Air Act [42 U.S.C. Section 7401 et seq.] |
| CAAPP | Clean Air Act Permit Program |
| CAM | Compliance Assurance Monitoring |
| CEMS | Continuous Emission Monitoring System |
| CFR | Code of Federal Regulations |
| CO | Carbon Monoxide |
| ERMS | Emissions Reduction Market System |
| HAP | Hazardous Air Pollutant |
| IAC | Illinois Administrative Code |
| I.D. No. | Identification Number of Source, assigned by Illinois EPA |
| ILCS | Illinois Compiled Statutes |
| Illinois EPA | Illinois Environmental Protection Agency |
| LAER | Lowest Achievable Emission Rate |
| MACT | Maximum Achievable Control Technology |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO _x | Nitrogen Oxides |
| NSPS | New Source Performance Standards |
| PM | Particulate Matter |
| PM ₁₀ | Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods |
| PSD | Prevention of Significant Deterioration |
| RMP | Risk Management Plan |
| SO ₂ | Sulfur Dioxide |
| T1 | Title I - identifies Title I conditions that have been carried over from an existing permit |
| T1N | Title I New - identifies Title I conditions that are being established in this permit |
| T1R | Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit |
| USEPA | United States Environmental Protection Agency |
| VOM | Volatile Organic Material |

3.0 CONDITIONS FOR INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

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

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

- Iron Phosphate Coating Tanks
- Paint Burn-Off Oven

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:

None

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

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

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

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

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

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). Note: These activities are not required to be individually listed.

3.2 Compliance with Applicable Requirements

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

- 3.2.1 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322 (see Attachment 2) and 35 IAC Part 266. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.
- 3.2.2 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 218.301, which requires that organic material emissions not exceed 8.0 pounds per hour or, if no odor nuisance exists, do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.
- 3.2.3 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 218.182.
- 3.2.4 For each storage tank that has a storage capacity greater than 946 liters (250 gallons) and, if no odor nuisance exists, that stores an organic material with a vapor pressure exceeding 2.5 psia at 70°F, the Permittee shall comply with the applicable requirements of 35 IAC 218.122, which requires use of a permanent submerged loading pipe, submerged fill, or a vapor recovery system.
- 3.2.5 For each emission unit required to be included in determining applicability of 35 IAC 218 Subpart PP, QQ, RR and/or TT, total VOM emissions from insignificant activities (including storage and handling of formulations) in conjunction with the applicable emission units in Section 7 of this permit shall not equal or exceed 25 ton/yr.
- 3.2.6 For each organic material emission unit that is exempt from 35 IAC 218 Subpart QQ and/or TT, the Permittee shall maintain emissions of VOM to the atmosphere less than or equal to 2.3 Mg (2.5 tons) per calendar year. The total emissions from emission units (including insignificant and significant activities) not

complying with 35 IAC 218.946 and/or 218.986 shall not exceed 4.5 Mg (5.0 tons) per calendar year.

- 3.2.7 For each organic material emission unit that is exempt from 35 IAC 218 Subpart PP and/or RR, the Permittee shall maintain emissions of VOM to the atmosphere less than or equal to 0.91 Mg (1.0 tons) per calendar year. The total emissions from emission units (including insignificant and significant activities) not complying with 35 IAC 218.926 and/or 218.966 shall not exceed 4.5 Mg (5.0 tons) per calendar year.

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 |
|---------------|--|----------------------|-----------------------------------|
| M1332 | Touch Up Paint Booth M1332 | August, 1980 | Paint Booth Filters (For PM Only) |
| M1884 | Top Coat Product Paint Booth M1884 with Drying Oven Rated: 1.0 mmBtu/hr | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| M3302 | Top Coat Product Paint Booth M3302 | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| M4703 | Touch Up Paint Booth M4703 | January, 1980 | Paint Booth Filters (For PM Only) |
| M5794 | Touch Up Paint Booth M5794 | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| 6516 | Touch Up Paint Booth 6516 | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| CGF | 2 Natural Gas Combined Cycle Turbines with Fuel Oil #2 as Backup Rated: 73.41 mmBtu/Hr Each (7MW Each) | August, 2001 | None |
| CGF | 2 Natural Gas Duct Burners Rated: 112.2 mmBtu/Hr (Each) | August, 2001 | None |
| CGF | 1 #2 Diesel Fuel Emergency Generator Rated: 12 mmBtu/Hr (Peak Load: 1,650 kW) | 1989 | None |
| B4 | #4 Natural Gas Boiler with No. 2 Fuel Oil Backup Rated: 176.3 mmBtu/Hr | 1967 | None |
| B5 | #5 Natural Gas Boiler with No. 2 Fuel Oil Backup Rated: 176.3 mmBtu/Hr | 1967 | None |
| SRU | Solvent Reclamation Unit | September, 1995 | None |
| GT1 | Gasoline Tank #1 (12,000 Gallons) with Submerged Loading Pipe | May, 1987 | None |

5.0 OVERALL SOURCE CONDITIONS

5.1 General Source Description

5.1.1 Caterpillar, Inc. is located on Route 31 in Aurora. This source manufactures heavy off-highway equipment for earthmoving activities. Caterpillar's product line consists of large and medium wheel loaders, excavators, compactors and log skidders. The operations at this source include fabrication, welding and assembly. The source receives some parts for assembly and unfinished for fabrication and other operations. During fabrication the parts go through various operations including alkaline cleaning and coating, air drying, drilling, milling, welding, brazing, cutting, pressing into shape and painting of the final product.

5.1.2 This source is located in an area that is in non-attainment of the National Ambient Air Quality Standards for ozone and attainment for all other pollutants.

5.2 Major Source Status

5.2.1 This permit is issued based on the source requiring a CAAPP permit as a major source of HAP, NO_x, SO₂, and VOM emissions.

5.3 General Applicable Provisions and Regulations

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

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

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.
- b. Pursuant to 35 IAC 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, except as allowed by 35 IAC 212.123(b) and 212.124.
- c. Pursuant to 35 IAC 237.102, no person shall cause or allow open burning, except the Illinois EPA may grant permits for open burning in accordance with 35 IAC 237.201.

5.3.3 Ozone Depleting Substances

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

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

5.3.4 Risk Management Plan (RMP)

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

- a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or
- b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the RMP, as part of the annual compliance certification required by Condition 9.8.

5.3.5 Future Emission Standards

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

5.3.6 Episode Action Plan

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

5.4 General Non-Applicability of Regulations of Concern

General non-applicability of regulations of concern are not set for this source. However, there may be unit specific non-applicability of regulations of concern set forth in Section 7 of this permit.

5.5 General Source-Wide Control Requirements and Work Practices

General source-wide control requirements and work practices are not set for this source. However, there are source-wide requirements in the Standard Permit Conditions in Section 9. There may also be requirements for unit specific control requirements and work practices set forth in Section 7 of this permit.

5.6 General Source-Wide Production and Emission Limitations

5.6.1 Permitted Emissions for Fees

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

Permitted Emissions of Regulated Pollutants

| Pollutant | Tons/Year |
|------------------------------------|-----------|
| Volatile Organic Material (VOM) | 500 |
| Sulfur Dioxide (SO ₂) | 443 |
| Particulate Matter (PM) | 115 |
| Nitrogen Oxides (NO _x) | 374 |
| HAP, not included in VOM or PM | ---- |
| Total | 1,432 |

5.6.2 Emissions of Hazardous Air Pollutants

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

5.6.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, state 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.

5.7 General Testing Requirements

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

- a. Testing by Owner or Operator: The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests [35 IAC 201.282(a)].
- b. Testing by the Illinois EPA: The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary [35 IAC 201.282(b)].
- c. Any such tests are also subject to the Testing Procedures of Condition 8.5 set forth in the General Permit Conditions of Section 8.

5.8 General Monitoring Requirements

General monitoring requirements are not set for this source. However, there may be provisions for unit specific monitoring set forth in Section 7 of this permit.

5.9 General Recordkeeping Requirements

5.9.1 Annual Emission Records

The Permittee shall maintain records of total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions for Specific Emission Units)

of this permit to demonstrate compliance with Condition 5.6.1, pursuant to Section 39.5(7)(b) of the Act.

5.9.2 Records for HAP Emissions

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

5.9.3 Retention and Availability of Records

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

5.10 General Reporting Requirements

5.10.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the source with the permit requirements 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. There are also reporting requirements for unit specific emission units set forth in Section 7 of this permit.

5.10.2 Annual Emissions Report

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

5.11 General Operational Flexibility/Anticipated Operating Scenarios

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

5.12 General Compliance Procedures

5.12.1 General Procedures for Calculating Emissions

- a. Except as provided in Condition 9.1.3, compliance with the source-wide emission limits specified in Condition 5.6 shall be based on the recordkeeping and reporting requirements of

Conditions 5.9 and 5.10, and compliance procedures in Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit.

6.0 CONDITIONS FOR EMISSIONS CONTROL PROGRAMS

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 further reasonable progress toward attainment, as required by Section 182(c) of the Clean Air Act.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Once the ERMS begins, 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 during initial issuance of the sources' CAAPP permits. These allotments are established from historical VOM emissions or "baseline emissions" lowered to provide the emission reduction from stationary sources required for 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 account to cover its actual VOM emissions during the preceding season. An 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 account database. The Illinois EPA will then retire ATUs in sources' accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its 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 emission reductions from an Emission Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 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 (35 IAC 205.710). Sources may also transfer or sell the ATUs that they holds to other sources or participants [35 IAC 205.630].

6.2 Applicability

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

6.3 Obligation to Hold Allotment Trading Units (ATUs)

- a. Pursuant to 35 IAC 205.150(c)(1) and 205.720, and as further addressed by Condition 6.8, as of December 31 of each year, this source shall hold ATUs in its account in an amount not less than its VOM emissions during the preceding seasonal allotment period (May 1 - September 30) not including VOM emissions from the

following, or the source shall be subject to "emissions excursion compensation," as described in Condition 6.4.

- i. VOM emissions from insignificant units and activities as identified in Section 3 of this permit, in accordance with 35 IAC 205.220;
 - ii. Excess VOM emissions associated with startup, malfunction or breakdown of an emission unit as authorized elsewhere in this permit, in accordance with 35 IAC 205.225;
 - iii. Excess VOM emissions to the extent allowed by a Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e) (3);
 - iv. Excess VOM emissions that are a consequence of an emergency as approved by the Illinois EPA, pursuant to 35 IAC 205.750; and
 - v. VOM emissions from certain new and modified emission units as addressed by Section 6.7(b), if applicable, in accordance with 35 IAC 205.320(f).
- b. Notwithstanding the above condition, in accordance with 35 IAC 205.150(c) (2), if a source commences operation of a major modification, pursuant to 35 IAC Part 203, the source shall hold ATUs in an amount not less than 1.3 times its VOM emissions attributable to such major modification during the seasonal allotment period, determined in accordance with the construction permit for such major modification or applicable provisions in Section 7.0 of this permit.

6.4 Market Transaction

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

6.5 Emission Excursion Compensation

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

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

6.6 Quantification of Seasonal VOM Emissions

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

No exceptions
- b. The Permittee shall report emergency conditions at the source to the Illinois EPA in accordance with 35 IAC 205.750, if the Permittee intends to deduct VOM emissions in excess of the technology-based emission rates normally achieved that are attributable to the emergency from the source's seasonal VOM emissions for purposes of the ERMS. These reports shall include the information specified by 35 IAC 205.650(a), and shall be submitted in accordance with the following:
 - i. An initial emergency condition report within two days of the time when such excess emissions occurred due to the emergency; and
 - ii. A final emergency condition report, if needed to supplement the initial report, within 10 days after the conclusion of the emergency.

6.7 Annual Account Reporting

- a. For each year in which the source is operational, the Permittee shall submit, as a component of its Annual Emission Report, seasonal VOM emission information to the Illinois EPA for the seasonal allotment period. This report shall include the following information [35 IAC 205.300]:

- i. Actual seasonal emissions of VOM from the source;
 - ii. A description of the methods and practices used to determine VOM emissions, as required by this permit, including any supporting documentation and calculations;
 - iii. A detailed description of any monitoring methods that differ from the methods specified in this permit, as provided in Section 205.337 of this Subpart;
 - iv. If a source has experienced an emergency, as provided in 35 IAC 205.750, the report shall reference the associated emergency conditions report that has been approved by the Illinois EPA;
 - v. If a source's baseline emissions have been adjusted due to a variance, consent order or CAAPP permit compliance schedule, as provided for in 35 IAC 205.320(e)(3), the report shall provide documentation quantifying the excess VOM emissions during the season that were allowed by the Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3); and
 - vi. If a source is operating a new or modified emission unit for which three years of operational data are not yet available, as specified in 35 IAC 205.320(f), the report shall specify seasonal VOM emissions attributable to the new emission unit or the modification of the emission unit.
- b. This report shall be submitted by November 30 of each year, for the preceding seasonal allotment period.

6.8 Allotment of ATUs to the Source

- a.
 - i. The allotment of ATUs to this source is 542 ATUs per seasonal allotment period.
 - ii. This allotment of ATUs reflects the Illinois EPA's determination that the source's baseline emissions were 61.39 tons.
 - iii. The source's allotment reflects 88% of the baseline emissions (12% reduction) except for the VOM emissions from specific emission unit excluded from such reduction, pursuant to 35 IAC 205.405 including units complying with MACT or using BAT, as identified in Section 7 of this permit.
 - iv. ATUs will be issued to the source's Transaction Account by the Illinois EPA annually. These ATUs will be valid for the seasonal allotment period following issuance and, if not retired in this season, the next seasonal allotment period.
 - v. Condition 6.3(a) becomes effective beginning in the seasonal allotment period following the initial issuance of ATUs by the Illinois EPA into the Transaction Account for the source.
- b. Contingent Allotments

(Pending construction)

There are no contingent allotments for this source.

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

6.9 Recordkeeping for ERMS

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

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

6.10 Federal Enforceability

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

7.0 UNIT SPECIFIC CONDITIONS FOR SPECIFIC EMISSION UNITS

7.1 Top Coat and Touch Up Paint Booths

7.1.1 Description

The painting in these paint booths is done manually with electrostatic spray guns. Paint booths are used for either touch up painting or top-coat painting. The drying of paint is by air with the parts transported by a conveyor. For Booth M1884, most of the drying of paint is in a natural gas oven with the parts on hooks, transported by a conveyor. Some of the larger parts from Booth M1884 use air drying. Clean up of paint spray guns is done at the end of each shift with solvent sprayed through and deposited in an empty 55 gallon drum for disposal. The drum is stored in an on line satellite storage area until full. After the drum is full it is sent to the source's reclamation area until proper disposal offsite. Prior to painting, the parts are sent through a single stage spray wash system using an alkaline cleaner.

7.1.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|---------------|---|----------------------|-----------------------------------|
| M1332 | Touch Up Paint Booth M1332 | August, 1980 | Paint Booth Filters (For PM Only) |
| M1884 | Top Coat Product Paint Booth M1884 with Drying Oven Rated: 1.0 mmBtu/hr | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| M3302 | Top Coat Product Paint Booth M3302 | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| M4703 | Touch Up Paint Booth M4703 | January, 1980 | Paint Booth Filters (For PM Only) |
| M5794 | Touch Up Paint Booth M5794 | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| 6516 | Touch Up Paint Booth 6516 | After April 14, 1972 | Paint Booth Filters (For PM Only) |

7.1.3 Applicable Provisions and Regulations

- a. Paint Booths M1332, M4703, M5794, 6516, M1884 and M3302 are "affected coating lines" for the purpose of these unit-specific conditions.
- b. The affected coating lines are subject to the emission limits identified in Condition 5.2.2.
- c. The affected coating lines are subject to the NESHAP, 40 CFR 63 Subparts A: General Provisions and NESHAP, 40 CFR 63 Subpart MMMM: Surface Coating of Miscellaneous Metal Parts and Products (effective date January 2, 2004) because the source owns or operates a facility that is a major source of HAP emissions. The Illinois EPA is administering NESHAP in Illinois on behalf of the USEPA under a delegation

agreement. The timeline for the initial notification, recordkeeping and reporting requirements as follows:

- i. Initial compliance with NESHAP, 40 CFR 63 Subparts A and MMMM: Surface Coating of Miscellaneous Metal Parts and Products (effective date January 2, 2004) the following timeline for notification, recordkeeping and reporting shall be followed for the existing coating lines:
 - A. Submit initial notification to the Illinois EPA no later than January 2, 2005 [40 CFR 63.3910(b)];
 - B. Compliance date for a major facility for HAPs is January 2, 2007 [40 CFR 63.3883(b)];
 - C. Conduct an initial compliance demonstration. The initial compliance demonstration must be completed for the initial compliance period, which begins on January 3, 2007 and ends January 31, 2008 [40 CFR 63.3940, 63.3950, 63.3960];
 - D. Submit a Notification of Compliance Status (NOCS) to the Illinois EPA within 30 days after initial compliance period. The initial compliance period ends on the last day of the 12th full month following the compliance date [40 CFR 63.3910];
 - E. Submit notification to the Illinois EPA of intent to conduct a performance test if add-on controls are used no later than November 3, 2006 and within 60 days prior to the test date [40 CFR 63.9(e)];
 - F. Conduct performance test no later than January 2, 2007 [40CFR63.3960(b)(1)]. Note: Performance tests must be performed for each capture system and add-on control device, except for the solvent recovery systems. For the solvent recovery systems, the first material balance must be performed;
 - G. Results of the initial performance tests shall be submitted to the Illinois EPA no later than March 1, 2008 and within 60 days of completion of test [40CFR63.3910, 63.3920];
 - H. After the initial compliance period each affected coating line must submit semiannual compliance reports. Semiannual compliance reports shall be submitted to the Illinois EPA beginning July 31, 2008, and every January 31 and July 31 thereafter [40CFR63.3920(a)(1)].
 - I. Revise the CAAPP permit to include the requirements of NESHAP, 40 CFR 63 Subparts A and

MMMM: Surface Coating of Miscellaneous Metal Parts and Products once the above conditions are met.

- d. The affected coating lines are subject to 35 IAC 212.321(a), which provides that:
 - i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (see also Attachment 1) [35 IAC 212.321(a)].
 - e. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2,000 ppm [35 IAC 214.301].
 - f. Pursuant to 35 IAC 218.204, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the specified coating. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. The emission limitations are as follows:
 - i. Miscellaneous Metal Parts and Products Coating/Extreme Performance Coating Baked [35 IAC 218.204(j) (2) (b) and 35 IAC 218.204(k) (4)]:

| | |
|----------------------------|-----------------------------|
| $\frac{\text{kg/l}}{0.40}$ | $\frac{\text{lb/gal}}{3.3}$ |
|----------------------------|-----------------------------|
 - ii. Heavy Off-Highway Vehicle Products Coating/Extreme Performance Top-Coat (Air Dried) [35 IAC 218.204(k) (2)]:

| | |
|----------------------------|-----------------------------|
| $\frac{\text{kg/l}}{0.42}$ | $\frac{\text{lb/gal}}{3.5}$ |
|----------------------------|-----------------------------|

7.1.4 Non-Applicability of Regulations of Concern

- a. The affected coating lines are not subject to 35 IAC 212.324, Process Emission Units In Certain Areas, because the source is not located in a non-attainment area for PM10, as identified in 35 IAC 212.324(a) (1).

- b. No owner or operator of a coating line subject to the limitations of 35 IAC 218.204 is required to meet the limitations of 35 IAC 218.301 or 218.302, Use of Organic Material, after the date by which the coating line is required to meet 35 IAC 218.204 [35 IAC 218.209].
- c. The drying oven on the affected coating line is not subject to 35 IAC 216.121, Emissions of Carbon Monoxide from Fuel Combustion Emission Units, because the actual heat input is less than 2.9 MW (10 mmBtu/hr) and the drying oven is not by definition a fuel combustion emission unit.
- d. The drying oven on the affected coating line is not subject to 35 IAC 216.121, emissions of nitrogen oxides from new fuel combustion emission sources, because the actual heat input is less than 7.32 MW (250 mmBtu/hr) and the drying oven is not by definition a fuel combustion emission unit.
- e. This permit is issued based on the affected coating lines not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected coating lines i) does not use an add-on control device(s) to achieve compliance with VOM emission limitation or standard and ii) does not have pre-control PM₁₀ emissions exceeding major source threshold.

7.1.5 Control Requirements and Work Practices

- a. The Permittee shall follow good operating practices for the paint booth filters, including periodic inspection, routine maintenance and prompt repair of defects.
- b. The drying oven on the affected coating line shall only be operated with natural gas as the fuel.

7.1.6 Production and Emission Limitations

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

7.1.7 Testing Requirements

Testing for VOM content of coatings and other materials shall be performed as follows [35 IAC 218.105(a), 218.211(a), and Section 39.5(7)(b) of the Act]:

- a. On at least an annual basis or upon reasonable request by the Illinois EPA:
 - i. The VOM content of representative coatings "as applied" on the affected coating lines shall be determined according to USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 218.105(a).

- ii. This testing may be performed by the supplier of a material provided that the supplier provides appropriate documentation for such testing to the Permittee and the Permittee's records pursuant to Condition 7.1.9(b) directly reflect the application of such material and separately account for any additions of solvent.
- iii. Upon written request from the Permittee, the Illinois EPA may waive this requirement on a year-by-year basis, if prior testing shows a margin of compliance and no significant changes in coating supplies have occurred.

7.1.8 Monitoring Requirements

Monitoring requirements are not set for the affected coating lines. However, there may be provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.1.9 Recordkeeping Requirements

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

- a. Records of the testing of VOM content of coatings and cleaning solvents pursuant to Condition 7.1.7, which include the following [Section 39.5(7)(e) of the Act]:
 - i. Identification of material tested;
 - ii. Results of analysis;
 - iii. Documentation of analysis methodology; and
 - iv. Person performing analysis.
- b. Pursuant to 35 IAC 218.211(c)(2), the Permittee shall collect and record all of the following information each day for the affected coating lines and maintain the information at the source for a period of three years:
 - i. The name and identification number of each coating as applied on each affected coating line; and
 - ii. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each affected coating line.
- c. Records addressing use of good operating practices for the paint booth filters:

- i. Records for periodic inspection of the paint booth filters with date, individual performing the inspection, and nature of inspection; and
- ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- d. Records of the coating usage for the affected coating lines, gal/day and gal/yr;
- e. The VOM content of coatings, % by wt;
- f. Density of coatings, lb/gal;
- g. Records of the solvent usage for the affected coating lines, gal/day and gal/yr;
- h. Density of solvent, lb/gal;
- i. Natural gas usage (mft³/mo and mft³/yr); and
- j. The aggregate monthly and annual PM and VOM emissions from the affected coating lines based on the material usage, with supporting calculations. The aggregate monthly and annual NO_x and CO emissions from the coating oven based on fuel usage and supporting calculations.

7.1.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected coating lines with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:
 - i. Shall notify the Illinois EPA of any record showing violation of Condition 7.1.3(f) (see also 35 IAC 218.204) within 30 days following the occurrence of the violation.
 - ii. Continued operation of an affected coating line with a defect in a paint booth filter that may result in emissions of particulate matter in excess of limits in Condition 7.1.3(d) within 30 days of such an occurrence.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected coating lines and oven. However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.1.12 Compliance Procedures

- a. Compliance with Condition 7.1.3(d) is addressed by the normal work practices and maintenance activities for the

paint booth filters required in Condition 7.1.5 and the records required in Condition 7.1.9.

- b. Compliance with Conditions 7.1.3(d) and 7.1.3(f) for the affected coating lines are addressed by the requirements of Condition 7.1.5, the VOM testing requirements in Condition 7.1.7 and the PM and VOM records required in Condition 7.1.9. PM and VOM emissions from the affected coating lines shall be calculated based on the following:

- i. Particulate Matter Emissions:

$$\text{PM (lb)} = (\text{Coating Usage, gal}) \times (\text{Coating Density, lb/gal}) \times (\text{Wt \% Solids}) \times [1 - (\text{Transfer Efficiency}^* (\%)/100)] \times [1 - (\text{Paint Booth Filter Efficiency}^* (\%)/100)]$$

* As specified by manufacturer or vendor of the spray booths and paint booth filters

- ii. Volatile Organic Material Emissions:

$$\text{VOM (lb)} = (\text{Coating Usage, gal}) \times (\text{Coating Density, lb/gal}) \times (\text{VOM Content of Coating, \% by Wt.}) + (\text{Cleaning Solvent Usage, gal}) \times (\text{Solvent Density, lb/gal})$$

- c. Compliance with the emission limits in Conditions 5.6 and 7.1.3(e) are addressed by the records required in Condition 7.1.9 and the emission factors and formulas listed below:

- i. Emission factors for the affected drying oven:

| <u>Pollutant</u> | <u>Emission Factors (lb/Mft³)</u> |
|------------------|--|
| VOM | 5.5 |
| PM | 7.6 |
| SO ₂ | 0.6 |
| NO _x | 100 |
| CO | 84 |

These are the emission factors for uncontrolled natural gas combustion in commercial boilers (0.3 - < 10 mmBtu/hr), Tables 1.4-1, 1.4-2 and 1.4-3, AP-42, Volume I, Fifth Edition, July 1998 or current edition.

- ii. Emission formula for the affected drying oven:

$$\text{Drying Oven Emissions (lb)} = (\text{Natural Gas Consumed, Mft}^3) \times (\text{The Appropriate Emission Factor, lb/Mft}^3)$$

7.2 Turbines (Subject to NSPS - 40 CFR Subpart GG) and Heat Recovery Steam Generators (HRSG) (Subject to NSPS - 40 CFR Subpart Dc)

7.2.1 Description

The two turbines and one #2 diesel fuel emergency generator are process emission units, and the two heat recovery steam generators with duct burners (HRSGs) are fuel combustion emission units exhausted through a common stack, and are used to generate electricity and steam for this facility. The turbines are powered by natural gas and distillate fuel oil. The HRSGs are powered by natural gas only and the emergency generator is fueled by distillate fuel oil only. Each turbine system has a total nominal capacity of 7 MW and the emergency generator peak load capacity is 1.65 MW.

7.2.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|---------------|---|------------------|----------------------------|
| CGF | 2 Natural Gas Combined Cycle Turbines with Fuel Oil #2 as Backup Rated: 73.41 mmBtu/Hr Each (7MW Each) | August, 2001 | None |
| CGF | 2 Natural Gas Duct Burners Rated: 112.2 mmBtu/Hr (Each) | August, 2001 | None |
| CGF | 1 #2 Diesel Fuel Emergency Generator Rated: 12mmBtu/Hr (Peak Load: 1,650 KW) | 1989 | None |

7.2.3 Applicable Provisions and Regulations

- a. i. An "affected turbine" for the purpose of these unit-specific conditions, is a turbine described in Conditions 7.2.1 and 7.2.2.
- ii. An "affected HRSG" for the purpose of these unit-specific conditions, is a HRSG described in Conditions 7.2.1 and 7.2.2.
- b. The affected turbines and affected HRSGs are subject to the emission limits identified in Condition 5.2.2.
- c. i. The affected turbines are subject to the NSPS for Stationary Gas Turbines, 40 CFR 60 Subparts A and GG, because the heat input at peak load is equal to or greater than 10.7 gigajoules per hour (10 mmBtu/hr), based on the lower heating value of the fuel fired and the affected turbines commenced construction, modification, or reconstruction after October 3, 1977. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.

A. Standard for Nitrogen Oxides:

Pursuant to 40 CFR 60.332(b), electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of 40 CFR 60.332(a)(1). Pursuant to 40 CFR 60.332(a)(1), no owner or operator of an affected turbine shall cause to be discharged into the atmosphere from such gas turbine, any gases which contain nitrogen oxides in excess of:

$$\text{STD} = 0.0075 \frac{(14.4)}{Y} + F$$

Where:

STD = Allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = Manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO_x emission allowance for fuel-bound nitrogen calculated from the nitrogen content of the fuel as follows:

| Fuel-Bound Nitrogen (Percent by Weight) | F (NO _x percent by volume) |
|--|--|
| N < 0.015 | 0 |
| 0.015 < N < 0.1 | 0.04 (N) |
| 0.1 < N < 0.25 | 0.04 + 0.0067(N - 0.1) |
| N > 0.25 | 0.005 |

Where:

N = The nitrogen content of the fuel (percent by weight) determined in accordance with Condition 7.2.8.

B. Standard for Sulfur Dioxide

I. No owner or operator of an affected turbine shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis [40 CFR 60.333(a)].

II. No owner or operator of an affected turbine shall burn in any stationary gas turbine any fuel which contains sulfur in

excess of 0.8 percent by weight [40 CFR 60.333(b)].

- ii. The affected HRSGs are subject to the notification and recordkeeping requirements established in NSPS, 40 CFR 60 Subparts A: General Provisions and NSPS, 40 CFR 60 Subparts Dc: Small Industrial-Commercial Institutional Steam Generating Units, because the construction, modification, or reconstruction commenced after June 9, 1989. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.
- d. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].
- e. No person shall cause or allow the emission of carbon monoxide into the atmosphere from any fuel combustion emission source with actual heat input greater than 10 mmBtu/hr to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].

7.2.4 Non-Applicability of Regulations of Concern

- a. The affected turbines are not subject to the NESHAP, 40 CFR 63 Subparts A: General Provisions and NESHAP, 40 CFR 63 Subpart YYYY: Stationary Combustion Turbines because the source owns or operates turbines that were constructed or reconstructed on or before January 14, 2003. The turbines are considered by definition an existing stationary combustion turbine, therefore not subject to NESHAP A and YYYY. No initial notification is required. The Illinois EPA is administering NESHAP in Illinois on behalf of the USEPA under a delegation agreement [40 CFR 63.6090 (a) (1), 63.6090 (b) (4)].
- b. The affected emergency generator is not subject to the NESHAP, 40 CFR 63 Subparts A: General Provisions and NESHAP, 40 CFR 63 Subpart ZZZZ: Reciprocating Internal Combustion Engines (RICE) because the source owns or operates an emergency generator. The Illinois EPA is administering NESHAP in Illinois on behalf of the USEPA under a delegation agreement [40 CFR 63.6090 (a) (1), 63.6090 (b) (4)].
- c. This permit is issued based on the affected turbines and emergency generator not being subject to the requirements of 35 IAC 212.321 or 212.322, because due to the unique nature of these units, a process weight rate can not be set so that such rules can not reasonably be applied.
- d. This permit is issued based on the affected HRSGs not being subject to the requirements of 35 IAC 212.321 or 212.322, because the HRSGs are fuel combustion emission units.

- e. The affected turbines and emergency generator are not subject to 35 IAC 217.141, because the affected emission units are not by definition a fuel combustion unit.
- f. The affected turbines and emergency generator are not subject to 35 IAC 216.121, because the affected emission units are not by definition a fuel combustion unit.
- g. The affected turbines, HRSGS and emergency generator are not subject to the requirements of the NO_x Compliance Programs of 35 IAC Part 217 because each affected emission unit has a nameplate capacities less than 25 MW.
- h. The affected turbines, HRSGS and emergency generator are not subject to 35 IAC Part 217.121 because each affected emission unit has a nameplate capacities less than 73.2 MW (250mmBtu/hr).
- i. This permit is issued based on the affected turbines, HRSGS and emergency generator not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected emission units do not use an add-on control device to achieve compliance with an emission limitation or standard.

7.2.5 Control Requirements and Work Practices

- a. At all times, the Permittee shall maintain and operate the turbines, HRSGs, duct burners and emergency generator in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the NSPS, 40 CFR 60.11(d).
- b. Only natural gas and distillate fuel oil may be fired in the turbines.
- c. Natural gas shall be the only fuel fired in the duct burners.
- d. Distillate fuel oil shall be the only fuel fired in the emergency generator.

7.2.6 Production and Emission Limitations

In addition to Condition 5.3.2 and the source-wide emission limitations in Condition 5.6, the affected turbines are subject to the following [T1]:

- a. Natural gas usage in each turbine shall not exceed 59.6 million scf/month and 715 million scf/year [T1]. The above limitations were established in Permit 01020029 [T1].
- b. Fuel oil usage in each turbine shall not exceed 31,000 gallons/month and 93,200 gallons/year [T1]. The above limitations were established in Permit 01020029 [T1].
- c. Natural gas usage in the duct burners associated with the turbines shall not exceed 68.4 million scf/month and 821 million scf/year [T1]. The above limitations were established in Permit 01020029 [T1].

- d. Fuel oil usage in the emergency generator shall not exceed 11,250 gallons/month and 135,000 gallons/year [T1]. The above limitations were established in Permit 01020029 [T1].
- e. Emissions from each turbine, including the duct burners and emergency generator, shall not exceed the following limits:

| | Natural Gas Model <u>(Lbs/Hour)</u> | Fuel Oil Model <u>(Lbs/Hour)</u> | Generator <u>(Lbs/Hour)</u> |
|-----------------|--|-------------------------------------|--------------------------------|
| NO _x | 19.68 | 41.12 | 51.50 |
| CO | 19.49 | 14.71 | 9.60 |
| SO ₂ | 0.32 | 52.97 | 3.20 |
| VOM | 3.0 | 1.04 | 1.60 |
| PM | 1.33 | 1.73 | 1.00 |

These limits are based on emission data in the application, including the maximum firing rate of turbine and duct burners, and generator.

- f. Annual emissions from the turbines including the duct burners and the emergency generator, in total shall not exceed the following limits:

| | Turbine and Dust Burners <u>(Tons/Year)</u> | Generator <u>(Tons/Year)</u> |
|-----------------|--|---------------------------------|
| NO _x | 139.85 | 25.75 |
| CO | 135.10 | 4.80 |
| SO ₂ | 9.01 | 1.60 |
| VOM | 20.55 | 0.80 |
| PM | 11.56 | 0.50 |

This permit is issued based on the construction and operation of the new emission units not constituting a major modification subject to the federal rules for Prevention of Significant Deterioration of Air Quality, (PSD) 40 CFR 52.21. For emissions of NO_x and CO this determination relies upon contemporaneous decreases in NO_x emissions from existing units such that the net changes in NO_x and CO emissions from this project is not significant when taken with creditable decreases from the removal of existing coal boilers and two incinerators along with associated creditable decreases.

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 01020029, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.2.7 Testing Requirements

The following methods and procedures shall be used for testing of emissions:

- a. USEPA Reference Test Methods shall be used for emission testing, including the following methods:

| | |
|-----------------|-----------------|
| Carbon Monoxide | USEPA Method 10 |
| Nitrogen Oxides | USEPA Method 7 |
- b. Measurements for NO_x from the turbines/duct burners shall be conducted in accordance with 40 CFR 60.335, as specified below, unless alternative testing procedures are approved by USEPA pursuant to 40 CFR 60.8(b).
- c. The NO_x emissions shall be computed for each run using the equation in 40 CFR 60.335(c)(1).
- d. The span values for Method 20 shall be 300 ppm of NO_x and 21 percent O₂, pursuant to 40 CFR 60.335(c)(3).
- e. The NO_x emissions shall be determined separately for both gas and oil firing, at four points in the normal operating range of the turbine, including the minimum point in the range and peak load, pursuant to 40 CFR 60.335(c)(2), and for the combined operations of the turbine and duct burners.
- f. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer, pursuant to 40 CFR 60.335(c)(2).
- g. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing and shall include as a minimum:
 - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - ii. The specific conditions under which testing shall 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 will be tracked and recorded.
 - iii. The specific determinations of emissions and operation which are intended to be made, including sampling and monitoring locations.
 - iv. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods.
- h. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification for the expected date of testing shall be

submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

- i. Three copies of the Final Reports for these tests shall be forwarded to the Illinois EPA within 30 days after the test results are compiled and finalized. The Final Report from testing shall contain a minimum:
 - i. A summary of results;
 - ii. General information;
 - iii. Description of test method(s), including a description of sampling points, sampling train, analysis equipment, and test schedule;
 - iv. Detailed description of test conditions, including:
 - A. Fuel consumption;
 - B. Turbine firing rate;
 - C. Duct burner firing rate; and
 - D. Turbine/steam turbine output rate.
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analysis, sample calculations, and data on equipment calibration.

7.2.8 Monitoring Requirements

- a. The Permittee shall monitor the sulfur and nitrogen content of the fuel being fired in the turbines in accordance with 40 CFR 60.334(b) unless a custom schedule or other alternative provisions for monitoring are approved by the USEPA.
- b. The Permittee shall install monitors on each turbine and the duct burners associated with each turbine to measure and record fuel consumption (scf and gallons).

7.2.9 Recordkeeping Requirements

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

- a. The Permittee shall maintain a file of the following items:

- i. Manufacturers specification of rated turbine and duct burner load;
 - ii. Heat and sulfur content of the fuels being fired in the turbines, HRSGs and emergency generator with supporting documentation, on a quarterly basis; and
 - iii. A copy of the Final Report(s) for emission testing conducted pursuant to Condition 7.2.7.
- b. The Permittee shall maintain the following daily and monthly operating records:
 - i. Operating hours for each affected turbine, each affected HRSG and emergency generator (hr/day and hr/year).
 - ii. The quantity of natural gas fuel consumed for each turbine (scf/day and scf/year);
 - iii. The quantity of distillate fuel oil consumed in each turbine, (gallon/ day and gallon/ year);
 - iv. The quantity of fuel consumed for each duct burner (scf/day and scf/year);
 - v. The quantity of fuel consumed for the emergency generator (gallons/ day and gallon/ year).
- c. The Permittee shall keep inspection, maintenance and repair logs with dates and the nature of such activities for the turbines, (turbine burner and duct burner), HRSGs and emergency generator.
- d. The Permittee shall maintain the following records related to emissions from the turbines, HRSGs, and emergency generator:
 - i. Other data, not addressed above, used or relied upon by the Permittee to determine emissions;
 - ii. Monthly emissions of NO_x, CO, SO₂, VOM, and PM from each turbine, including the duct burners unit and emergency generator. Emissions shall be calculated based on fuel consumption and operating data and site-specific emission factors developed from emission test data (NO_x and CO) and standard emission factors (PM, VOM, and SO₂) or by other procedures approved by the Illinois EPA in the source's CAAPP permit;
 - iii. Emissions of each pollutant from the affected turbines, affected HRSGs and affected emergency generator, with supporting calculations including documentation on the validity of the emission factors used, ton/month and ton/yr; and
 - iv. The annual emissions of NO_x, SO₂, PM, VOM and CO for each month using current months data and previous 11 months data with supporting calculations.

- e. The Permittee shall maintain records that identify any day in which emissions or operation exceed an applicable standard or limitation.
- f. The Permittee shall maintain the following if required:
 - i. Any periods during which a continuous monitoring system was not operational, with explanation.
- g. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

7.2.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected turbines, HRSGs and emergency generator with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:
 - i. Notification within 30 days for operation of an affected turbine and/or affected HRSG and/ or emergency generator that was not in compliance with applicable requirements of Section 7.2.3, 7.2.5, and 7.2.6.
- b. The affected turbines, affected HRSGs and affected emergency generator shall comply with the applicable quarterly reporting requirements of 40 CFR 60.7(c) and 60.334(c).
- c. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

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

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected turbines, HRSGs and emergency generator. However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.2.12 Compliance Procedures

- a. Compliance with Condition 7.2.3(c) (i) (A) and (B) is demonstrated by the monitoring requirements of 7.2.8 and by the recordkeeping requirements of 7.2.9.
- b. Compliance with Condition 7.2.3(c) (ii) is demonstrated by the monitoring requirements of 7.2.8 and by the recordkeeping requirements of 7.2.9.
- c. Compliance with Condition 7.2.3(d) is demonstrated by the monitoring requirements of 7.2.8 and by the recordkeeping requirements of 7.2.9, as well as the proper operating conditions of the affected turbines.
- d. Compliance with Condition 7.2.3(e) is addressed by the normal work practices and maintenance activities required in Condition 7.2.5 and the records required in Condition 7.2.9.
- e. Compliance with the emission limits in Conditions 5.6 and 7.2.6 shall be determined by using published emission factors, Illinois EPA approved stack test data, Illinois EPA approved measured emission factors, or approved manufacturer's data and the recordkeeping requirements in Condition 7.2.9 as follows, (or most current emission factors):

| | Natural Gas Mode Turbines <u>(Lb/mmBtu)</u> | Oil Mode Turbines <u>(Lb/mmBtu)</u> | Duct Burner <u>(Lb/mmBtu)</u> | Generator <u>(Lb/mmBtu)</u> |
|-----------------|---|---|-------------------------------------|--------------------------------|
| NO _x | 0.1 | 0.392 | 0.1 | 3.2 |
| CO | 0.122 | 0.124 | 0.08 | 0.85 |
| PM | 0.007 | 0.012 | 0.008 | 0.1 |
| VOM | 0.003 | 0.001 | 0.025 | 0.09 |
| SO ₂ | 0.003 | 0.505 | 0.001 | 1.01S |

7.3 Natural Gas Boilers with #2 Fuel Oil as Back-Up

7.3.1 Description

Boilers #4 and #5 use natural gas with low NO_x burners as the primary fuel and have the capability to use No. 2 fuel oil for backup. These natural gas-fired boilers are backup to the cogeneration facility and are only used as needed.

7.3.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|---------------|--|------------------|----------------------------|
| B4 | #4 Natural Gas Boiler with No. 2 Fuel Oil Backup Rated: 176.3 mmBtu/Hr | 1967 | None |
| B5 | #5 Natural Gas Boiler with No. 2 Fuel Oil Backup Rated: 176.3mmBtu/Hr | 1967 | None |

7.3.3 Applicable Provisions and Regulations

- a. Boilers #4 and #5 are "affected boilers" for the purpose of these unit-specific conditions.
- b. Each affected boiler is subject to the opacity emission limits identified in Condition 5.2.2.
- c. The affected boilers are subject to the NESHAP, 40 CFR 63 Subparts A: General Provisions and NESHAP, 40 CFR 63 Subpart DDDDD: Industrial/ Commercial/ Institutional Boilers and Process Heaters (effective date September 13, 2004) because the source owns or operates a facility that is a major source of HAP emissions. The Illinois EPA is administering NESHAP in Illinois on behalf of the USEPA under a delegation agreement. These boilers are considered Population II initial notification only. Initial notification shall be submitted no later than March 12, 2005 [40 CFR 63.7545(b
- d. 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].
- e. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period to exceed 0.15 kg of particulate matter per MW-hr of actual heat input from any fuel combustion emission unit using liquid fuel exclusively (0.10 lb/mmBtu) [35 IAC 212.206].
- f. No person shall cause or allow the emission of sulfur dioxide in any one hour period from any existing fuel combustion emission unit with actual heat input smaller than, or equal to 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-

hr of actual heat input when distillate fuel oil is burned (0.3 lb/mmBtu) [35 IAC 214.161(b)].

7.3.4 Non-Applicability of Regulations of Concern

- a. The NSPS for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db, applies to units for which construction, modification or reconstruction is commenced after June 19, 1984 and that have a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 mmBtu/hr). The affected boilers were constructed in 1967, therefore, these rules do not apply.
- b. The affected boilers are not subject to 35 IAC 217.141, emissions of nitrogen oxides from existing fuel combustion emission sources in major metropolitan areas, because the actual heat input of the boilers are less than 73.2 MW (250 mmBtu/hr).
- c. The provisions of 35 IAC 218.301 and 302, Use of Organic Material, shall not apply to fuel combustion emission sources [35 IAC 218.303].
- d. This permit is issued based on the affected boilers not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected boilers do not use an add-on control device to achieve compliance with an emission limitation or standard.

7.3.5 Control Requirements and Work Practices

- a. The affected boilers shall only be fired with natural gas and distillate fuel oil.
- b. The Permittee shall not utilize distillate fuel oil (Grades No. 1 and 2) in the affected boilers with a sulfur content greater than the larger of the following two values:
 - i. 0.28 weight percent; or
 - ii. The Wt percent given by the formula: Maximum Wt percent sulfur = $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$.

7.3.6 Production and Emission Limitations

In addition to Condition 5.3.2 and the source-wide emission limitations in Condition 5.6, the affected boilers are subject to the following:

- a. For the purpose of this permit, operation in secondary service means at most operation of the affected boilers in a hot standby mode, except during partial or total outage of the cogeneration facility or when necessary during extreme weather when cogeneration facility can not keep up with the demand.

- b. Annual fuel consumption by the gas boilers combined shall not exceed 247 Mft³ (2.47 million therms).
- c. Annual emissions of boilers combined shall not exceed the following limits:

| <u>Pollutant</u> | <u>Emission Rate</u> | |
|------------------|----------------------|--------------------|
| | <u>(Tons/Month)</u> | <u>(Tons/year)</u> |
| NO _x | 2.50 | 18.86 |
| CO | 1.38 | 10.37 |
| PM | | 0.4 |
| SO ₂ | | 0.1 |
| VOM | | 0.7 |

Compliance with annual limits shall be determined from a running total of twelve (12) months of data.

These limits are based on information included in the application and established as limits by this permit including the maximum usage, fuel usage and the applicable emission factors.

- d. The above limitations were established in Construction Permit 01020029 pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and 35 IAC Part 203. These limits ensure that the construction/modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 or 35 IAC Part 203.

7.3.7 Testing Requirements

- a. Upon reasonable request by the Illinois EPA, pursuant to Section 39.5(7)(d) of the Act, measurements of NO_x, CO and VOM. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Illinois EPA. Refer to 40 CFR 60, Appendix A for USEPA test methods:

| | |
|---------------------------|-----------------|
| Location of Sample Points | USEPA Method 1 |
| Gas Flow and Velocity | USEPA Method 2 |
| Carbon Monoxide | USEPA Method 10 |
| Nitrogen Oxides | USEPA Method 20 |
| Volatile Organic Material | USEPA Method 25 |

- b. Upon reasonable request by the Illinois EPA, pursuant to Section 39.5(7)(d) of the Act, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR part 60, Appendix A, and 35 IAC 212.109, so as to demonstrate compliance with the emission limits in Condition 7.3.3(b).
- c. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.

7.3.8 Monitoring Requirements

Monitoring requirements are not set for the affected boilers. However, there may be provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected boilers to demonstrate compliance with Conditions 5.6.1, 7.3.3, 7.3.5 and 7.3.6 pursuant to Section 39.5(7)(b) of the Act:

- a. Fuel oil supplier certification, including:
 - i. The date, place and time of sampling or measurements;
 - ii. The date(s) analyses were performed;
 - iii. The company or entity that performed the analyses;
 - iv. The analytical techniques or methods used;
 - v. The results of such analyses; and
 - vi. The operating conditions as existing at the time of sampling or measurement.
- b. Natural gas fuel usage for the affected boilers, Mft3/mo and Mft3/yr;
- c. Distillate fuel oil usage for the affected boilers, gal/mo and gal/yr;
- d. The maximum sulfur content (in wt. %) and the gross heating value of oil (mmBtu/lb) for each shipment of residual fuel oil used in the affected boilers;
- e. Monthly and annual aggregate SO₂, PM, NO_x, VOM and CO emissions, based on natural gas consumption and distillate oil for each boiler, with supporting calculations, shall be maintained, as determined by the procedures in Condition 7.3.12 to demonstrate compliance to Conditions 5.5.2, 7.3.3, 7.3.5 and 7.3.6;
- f. The annual emissions of NO_x, SO₂, PM, VOM and CO for each month is based on using current months data and previous 11 months data with supporting calculations; and
- g. These records shall be retained for at least five (5) years.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, 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. The use of distillate fuel oil with a sulfur content in excess of the limit specified in Condition 7.3.5 with the length of time this fuel was used and the effect on emissions of SO₂ within 30 days of this violation being detected.
- b. The use of natural gas in excess of the annual consumption limit of the combined boilers specified in Condition 7.3.6 with the amount of excess gas and the effect on emissions within 30 days of this violation being detected.
- c. Emissions of CO, NO_x, PM, SO₂, and/or VOM in excess of the limit specified in Conditions 7.3.3 and 7.3.6 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.
- d. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing and shall include as a minimum:
 - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - ii. The specific conditions under which testing shall 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 will be tracked and recorded.
 - iii. The specific determinations of emissions and operation which are intended to be made, including sampling and monitoring locations.
 - iv. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods.
- e. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notification with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected boilers. However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.3.12 Compliance Procedures

- a. Compliance with Conditions 7.3.3(c) and (d) are addressed by the normal work practices and maintenance activities in operation of natural gas-fired and distillate oil-fired boilers required in Condition 7.3.5 and the records required in Condition 7.3.9.
- b. Compliance with Condition 7.3.3(e) is addressed by the operation of the boiler with distillate fuel oil with a sulfur content meeting the specification of Condition 7.3.5 and the records required in Condition 7.3.9.
- c. Compliance with the emission limits of Condition 5.6 shall be based on the emission factors listed below:
 - i. To determine compliance with Condition 5.6, emissions from the affected boilers burning natural gas shall be calculated based on the following emission factors:

| <u>Pollutant</u> | Natural Gas Emission Factor <u>(lb/Mft³)</u> |
|------------------|---|
| CO | 84 |
| NO _x | 140 |
| PM | 7.6 |
| SO ₂ | 0.6 |
| VOM | 5.5 |

These are the emission factors for uncontrolled natural gas combustion in utility/large industrial boilers (> 100 mmBtu/hr), Tables 1.4-1, 1.4-2, and 1.4-3, AP-42, Volume I, Fifth Edition, July 1998 or current edition.

$$\text{Boiler Emissions (lb)} = (\text{Natural Gas Consumed, Mft}^3) \times (\text{The Appropriate Emission Factor, lb/Mft}^3)$$

- ii. To determine compliance with Condition 5.6, emissions from the affected boilers burning distillate fuel oil shall be calculated based on the following emission factors:

| <u>Pollutant</u> | Distillate Fuel Oil Emission Factor <u>(lb/1,000 gal)</u> |
|------------------|---|
| CO | 5 |
| NO _x | 24 |
| PM | 2 |
| SO ₂ | 142 S |
| VOM | 0.2 |

These are the emission factors for uncontrolled distillate fuel oil combustion in industrial boilers, Tables 1.3-2 and 1.3-15, AP-42, Volume I, Fifth Edition, September 1998 or current edition. S

indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Boiler Emissions (lb) = (Distillate Fuel Oil Consumed, gal) x (The Appropriate Emission Factor, lb/1,000 gal)

7.4 Solvent Reclamation Unit

7.4.1 Description

The solvent reclamation unit uses distillation to reclaim the solvents used during paint. The paints were formerly sent for thermal destruction. The paint solvent is gathered in 55 gallon drums during painting from paint gun clean up. The drums when full are sent to the reclaimer for distillation. The clean solvent is then put in a clean drum and returned to storage for use later during painting.

7.4.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|---------------|--------------------------|------------------|----------------------------|
| SRU | Solvent Reclamation Unit | September, 1995 | None |

7.4.3 Applicable Provisions and Regulations

- a. The Solvent Reclamation Unit is an "affected solvent reclamation unit" for the purpose of these unit-specific conditions.
- b. The affected solvent reclamation unit is subject to the emission limits identified in Condition 5.2.2.
- c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302, 218.303, 218.304 and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 218.301].

7.4.4 Non-Applicability of Regulations of Concern

- a. The affected solvent reclamation unit is not subject to 35 IAC 212.324, Process Emission Units In Certain Areas, because the source is not located in a non-attainment area for PM10, as identified in 35 IAC 212.324(a)(1).
- b. This permit is issued based on the affected solvent reclamation unit not being subject to 35 IAC 218 Subpart TT, Other Emission Units, because the affected solvent reclamation unit does not meet the applicability of 35 IAC 218.980(a) and (b). In particular, the affected solvent reclamation unit has:
 - i. Maximum theoretical emissions of VOM that are less than 90.7 Mg (100 tons) per year; and
 - ii. A potential to emit for VOM that is less than 22.7 Mg (25 tons) per year.

- c. This permit is issued based on the affected solvent reclamation unit turbines not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected emission unit do not use an add-on control device to achieve compliance with an emission limitation or standard.

7.4.5 Control Requirements and Work Practices

Control requirements are not set for the affected solvent reclamation unit. However, there are source-wide requirements in the Standard Permit Conditions in Section 9. There may also be requirements for general source-wide control requirements set forth in Condition 5.5.

7.4.6 Production and Emission Limitations

In addition to Condition 5.3.2 and the source-wide emission limitations in Condition 5.6, the affected solvent reclamation unit is subject to the following:

- a. Emissions and operation of equipment shall not exceed the following limits:

| <u>Item of Equipment</u> | <u>Operating Hours (hr/yr)</u> | <u>Process Rate (T/yr)</u> | <u>VOM Emissions (lb/hr) (T/yr)</u> | |
|--------------------------|------------------------------------|--------------------------------|---|-------|
| Solvent Reclamation Unit | 3,600 | 300 | 0.275 | 0.495 |

- b. These limits are based on standard emission factors, the maximum hours of operation, and the maximum process rate. Compliance with annual limits shall be determined from a running total of 12 months of data.
- c. The above limitations were established in Construction Permit 95060040 pursuant to 35 IAC Part 203. These limits ensure that the construction/modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to 35 IAC Part 203.

7.4.7 Testing Requirements

Testing requirements are not set for the affected solvent reclamation unit. However, there are general testing requirements in Conditions 5.7 and 8.5.

7.4.8 Monitoring Requirements

Monitoring requirements are not set for the affected solvent reclamation unit. However, there may be provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected solvent reclamation unit to demonstrate compliance with Conditions 5.6.1, 7.4.3 and 7.4.6, pursuant to Section 39.5(7) (b) of the Act:

- a. Records of the amount of solvent throughput of waste in the affected solvent reclamation unit, ton/mo and ton/yr;
- b. The operating schedule of the affected solvent reclamation unit; and
- c. Records of monthly and annual aggregate VOM emissions from the affected solvent reclamation unit shall be maintained, based on the applicable emission factors, with supporting calculations.

7.4.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected solvent reclamation unit with the permit requirements as follows, pursuant to Section 39.5(7) (f) (ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:
 - i. Emissions of VOM in excess of the limits in Condition 7.4.6 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected solvent reclamation unit. However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.4.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.4.9 and the emission factors and formulas listed below:

To determine compliance with Conditions 5.6, 7.4.3, and 7.4.6, emissions from the affected solvent reclamation unit shall be calculated based on the following emission factors:

| <u>Pollutant</u> | <u>Emission Factor (lb/ton)</u> |
|------------------|-------------------------------------|
| VOM | 3.30 |

These are the emission factors for solvent reclaiming, Table 4.7-1, AP-42, Volume I, Fifth Edition, October, 1996, or current edition. VOM emission factor is based on the condenser vent emission factor.

Solvent Reclaiming Emissions (lb) = (Amount of Reclaimed Solvent, ton) x (The Appropriate Emission Factor, lb/ton)

7.5 Gasoline Tank #1

7.5.1 Description

Tank #1 is a 12,000 gallon underground tank for the storage of gasoline for use in various plant vehicles.

7.5.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|---------------|---|------------------|----------------------------|
| GT1 | Gasoline Tank #1 (12,000 Gallons) with Submerged Loading Pipe | May, 1987 | None |

7.5.3 Applicable Provisions and Regulations

- a. Gasoline Tank #1 is an "affected tank" for the purpose of these unit-specific conditions.
- b. The affected tank is subject to the NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, 40 CFR 60 Subpart Kb, because the affected tank has a capacity greater than or equal to 40 m³ and is used to store VOLs for which construction, reconstruction, or modification is commenced after July 23, 1984.
- c. No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 [35 IAC 218.122(b)].
- d. The affected tank is subject to 35 IAC 218.583(c), which provides no person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank at a gasoline dispensing operation unless:
 - i. The tank is equipped with a submerged loading pipe [35 IAC 218.583(a)(1)]; and
 - ii. The vapors displaced from the storage tank during filling are processed by a vapor control system that includes one or more of the following:
 - A. A vapor collection system that meets the requirements of Condition 7.5.5(c) (see also 35 IAC 218.583(d)(4)) [35 IAC 218.583(a)(2)(A)]; or
 - B. A refrigeration-condensation system or any other system approved by the Illinois EPA and approved by the USEPA as a SIP revision, that recovers at least 90 percent by weight of all vaporized

- organic material from the equipment being controlled [35 IAC 218.583(a)(2)(B)]; and
- C. The delivery vessel displays the appropriate sticker pursuant to the requirements of 35 IAC 218.584(b) or (d) [35 IAC 218.583(a)(2)(C)]; and
- iii. All tank vent pipes are equipped with pressure/vacuum relief valves with the pressure/vacuum relief valve shall be set to resist a pressure of at least 3.5 inches water column and to resist a vacuum of no less than 6.0 inches water column [35 IAC 218.583(a)(3)].
- e. The affected tank is subject to 35 IAC 218.585, which provides that:
- i. No person shall sell, offer for sale, dispense, supply, offer for supply, or transport for use in Illinois gasoline whose Reid vapor pressure exceeds the applicable limitations set forth in Conditions 7.5.3(e)(ii) and (e)(iii) (see also 35 IAC 218.585(b) and (c)) during the regulatory control periods, which shall be May 1 to September 15 for retail outlets, wholesale purchaser-consumer, operations, and all other operations [35 IAC 218.585(a)].
- ii. The Reid vapor pressure of gasoline, a measure of its volatility, shall not exceed 9.0 psi (62.07 kPa) during the regulatory control period in 1990 and each year thereafter [35 IAC 218.585(b)].
- iii. The Reid vapor pressure of ethanol blend gasoline shall not exceed the limitations for gasoline set forth in Condition 7.5.3(e)(ii) (see also 35 IAC 218.585(b)) by more than 1.0 psi (6.9 kPa). Notwithstanding this limitation, blenders of ethanol blend gasoline whose Reid vapor pressure is less than 1.0 psi above the base stock gasoline immediately after blending with ethanol are prohibited from adding butane or any product that will increase the Reid vapor pressure of the blended gasoline [35 IAC 218.585(c)].

7.5.4 Non-Applicability of Regulations of Concern

- a. Except as provided in Condition 7.5.9(b) (see also 40 CFR 60.116b) storage vessels with design capacity less than 75 m³ 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 tank is 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 affected tank is used to store a petroleum liquid and the capacity is less than 151 m³ (40,000 gal).

- c. The affected tank is not subject to the requirements of 35 IAC 218.121, Storage Containers of VPL, pursuant to 35 IAC 218.123(a)(2), which exempts storage tanks with a capacity less than 151.42 m³ (40,000 gal).
- d. The affected tank is not subject to the requirements of 35 IAC 218.586, Gasoline Dispensing Operations - Motor Vehicle Fueling Operations, pursuant to 35 IAC 218.586(b), which exempts any gasoline dispensing operation which dispenses an average monthly volume of less than 10,000 gallons of motor vehicle fuel per month. Pursuant to 35 IAC 218.586(a)(1), average monthly volume means the amount of motor vehicle fuel dispensed per month from a gasoline dispensing operation based upon a monthly average for the 2-year period of November, 1990 through October, 1992 or, if not available, the monthly average for the most recent twelve calendar months. Monthly averages are to include only those months when the operation was operating.
- e. This permit is issued based on the affected tank not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected emission unit do not use an add-on control device to achieve compliance with an emission limitation or standard.

7.5.5 Control Requirements and Work Practices

- a. The affected tank shall only be used for the storage of gasoline.
- b. Pursuant to 35 IAC 218.583(c), each owner of a gasoline dispensing operation shall:
 - i. Install all control systems and make all process modifications required by Condition 7.5.3(c) (see also 35 IAC 218.583(a)) [35 IAC 218.583(c)(1)];
 - ii. Provide instructions to the operator of the gasoline dispensing operation describing necessary maintenance operations and procedures for prompt notification of the owner in case of any malfunction of a vapor control system [35 IAC 218.583(c)(2)]; and
 - iii. Repair, replace or modify any worn out or malfunctioning component or element of design [35 IAC 218.583(c)(3)].
- c. Pursuant to 35 IAC 218.583(d), each operator of a gasoline dispensing operation shall:
 - i. Maintain and operate each vapor control system in accordance with the owner's instructions [35 IAC 218.583(d)(1)];
 - ii. Promptly notify the owner of any scheduled maintenance or malfunction requiring replacement or repair of a major component of a vapor control system [35 IAC 218.583(d)(2)];

- iii. Maintain gauges, meters or other specified testing devices in proper working order [35 IAC 218.583(d) (3)]; and
- iv. Operate the vapor collection system and delivery vessel unloading points in a manner that prevents:
 - A. A reading equal to or greater than 100 percent of the LEL (measured as propane) when tested in accordance with the procedure described in EPA 450/2-78-051 Appendix B [35 IAC 218.583(d) (4) (A)]; and
 - B. Avoidable leaks of liquid during the filling of storage tanks [35 IAC 218.583(d) (4) (B)].

7.5.6 Production and Emission Limitations

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

7.5.7 Testing Requirements

- a. Pursuant to 35 IAC 218.583(a) (4), no person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank at a gasoline dispensing operation unless the owner or operator of a gasoline dispensing operation demonstrates compliance with Condition 7.5.3(d) (iii) (see also 35 IAC 218.583(a) (3)), by March 15, 1995 or 30 days after installation of each pressure/vacuum relief valve, whichever is later, and at least annually thereafter, by measuring and recording the pressure indicated by a pressure/vacuum gauge at each tank vent pipe. The test shall be performed on each tank vent pipe within two hours after product delivery into the respective storage tank. For manifold tank vent systems, observations at any point within the system shall be adequate. The owner or operator shall maintain any records required by this Condition for a period of three years.
- b. Within 15 business days after discovery of the leak by the owner, operator, or the Illinois EPA, repair and retest a vapor collection system which exceeds the limits of Condition 7.5.5(c) (4) (A) (see also 35 IAC 218.583(d) (4) (A)) [35 IAC 218.583(d) (5)].
- c. Upon reasonable request by the Illinois EPA, pursuant to Section 39.5(7) (b) of the Act, the Reid vapor pressure of gasoline and the ethanol content of ethanol blend gasoline shall be determine according to the methods specified below:
 - i. Pursuant to 35 IAC 218.585(d), all sampling of gasoline required pursuant to the provisions of Conditions 7.5.7(c) (ii) and (c) (iii) (see also 35 IAC 218.585(e) and (f)) shall be conducted by one or more of the following approved methods or procedures:
 - A. For manual sampling, ASTM D4057 [35 IAC 218.585(d) (1)];

- B. For automatic sampling, ASTM D4177 [35 IAC 218.585(d)(2)]; or
 - C. Sampling procedures for Fuel Volatility, 40 CFR 80 Appendix D [35 IAC 218.585(d)(3)].
- ii. The Reid vapor pressure of gasoline shall be measured in accordance with either test method ASTM D323 or a modification of ASTM D323 known as the "dry method" as set forth in 40 CFR 80, Appendix E. For gasoline - oxygenate blends which contain water-extractable oxygenates, the Reid vapor pressure shall be measured using the dry method test [35 IAC 218.585(e)].
 - iii. The ethanol content of ethanol blend gasoline shall be determined by use of one of the approved testing methodologies specified in 40 CFR 80, Appendix F [35 IAC 218.585(f)].

7.5.8 Monitoring Requirements

Monitoring requirements are not set for the affected tank. However, there may be provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected tank to demonstrate compliance with Conditions 5.6.1 and 7.5.3, pursuant to Section 39.5(7)(b) of the Act:

- a. Records of the testing of the affected tank pursuant to Condition 7.5.7, which include the following [Section 39.5(7)(e) of the Act]:
 - i. The date, place and time of sampling or measurements;
 - ii. The date(s) analyses were performed;
 - iii. The company or entity that performed the analyses;
 - iv. The analytical techniques or methods used;
 - v. The results of such analyses; and
 - vi. The operating conditions as existing at the time of sampling or measurement.
- b. 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 m³, but less than 75 m³ 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 m³ 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)].

- c. Each storage vessel with a design capacity less than 40,000 gallons is subject to no provisions of 35 IAC Part 218 other than those required by maintaining readily accessible records of the dimensions of the storage vessel and analysis of the capacity of the storage vessel [35 IAC 218.129(f)].
- d. Design information for the tank showing the presence of a permanent submerged loading pipe;
- e. Maintenance and repair records for the tank, as related to the repair or replacement of the loading pipe;
- f. The throughput of the affected tank, gal/mo and gal/yr; and
- g. The annual VOM emissions from the affected tank based on the material stored, the tank throughput, and the applicable emission factors and formulas with supporting calculations.

7.5.10 Reporting Requirements

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

- a. Any storage of VOL in an affected tank that is not in compliance with the requirements of Conditions 7.5.3(c) and (d)(i) (see also 35 IAC 218.122(b) and 218.583(a)(1)), e.g., no "permanent submerged loading pipe," within five days of becoming aware of the non-compliance status. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps taken to avoid future non-compliance;
- b. Any storage of VOL in an affected tank that is out of compliance with the requirements of Conditions 7.5.3(c) and (d)(i) (see also 35 IAC 218.122(b) and 218.583(a)(1)) due to damage, deterioration, or other condition of the loading pipe, within 30 days of becoming aware of the non-compliance status. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps to be taken to avoid future non-compliance;
- c. Upon request by the Illinois EPA, the owner or operator of a gasoline dispensing operation which claims to be exempt from the requirements of 35 IAC 218.586 shall submit records to the Illinois EPA within 30 calendar days from the date of the request which demonstrate that the gasoline dispensing operation is in fact exempt; and
- d. The storage of any VOL or VPL other than the material specified in Condition 7.5.5(a) within 30 days of becoming

aware of the non-compliance status. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps to be taken to avoid future non-compliance.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected tank. However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.5.12 Compliance Procedures

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

For the purpose of estimating VOM emissions from each affected tank, the version 3.1 of the TANKS program is acceptable.

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

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

This permit shield does not extend to applicable requirements which are promulgated after _____ (the date of issuance of the 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 if applicable test methods are not specified by the applicable regulations or otherwise identified in the conditions of this permit. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Conditions 8.6.3 and 8.6.4.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

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

| <u>Monitoring Period</u> | <u>Report Due Date</u> |
|--------------------------|------------------------|
| January - June | September 1 |

Monitoring Period

Report Due Date

July - December

March 1

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

8.6.2 Test Notifications

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

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

8.6.3 Test Reports

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

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;

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

8.6.4 Reporting Addresses

- a. Unless otherwise specified in the particular provision of this permit or in the written instructions distributed by the Illinois EPA for particular reports, reports and notifications shall be sent to the Illinois EPA - Air Compliance Unit with a copy sent to the Illinois EPA - Air Regional Field Office.
- b. As of the date of issuance of this permit, the addresses of the offices that should generally be utilized for the submittal of reports and notifications are as follows:
 - i. Illinois EPA - Air Compliance Unit

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

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

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016
 - iv. USEPA Region 5 - Air Branch

USEPA (A - 18J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

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

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

8.7 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.

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

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

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

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

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

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

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

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

9.2.4 Disposal Operations

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

9.2.5 Duty to Pay Fees

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

9.3 Obligation to Allow Illinois EPA Surveillance

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

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- d. Sample or monitor any substances or parameters at any location:
 - i. At reasonable times, for the purposes of assuring permit compliance or applicable requirements; or
 - ii. As otherwise authorized by the CAA, or the Act.

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

9.4 Obligation to Comply with Other Requirements

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

9.5 Liability

9.5.1 Title

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

9.5.2 Liability of Permittee

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

9.5.3 Structural Stability

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

9.5.4 Illinois EPA Liability

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

9.5.5 Property Rights

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

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

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

9.6.2 Records of Changes in Operation

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

9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7) (e) (ii) of the Act].
- b. Other records required by this permit including any logs, plans, procedures, or instructions required to be kept by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

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

9.8 Requirements for Compliance Certification

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

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

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

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

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

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

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

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

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

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

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

9.11 Permanent Shutdown

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

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

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

9.12.2 Reopening and Revision

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

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit.
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program.
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or that inaccurate statement were made in establishing the emission standards or limitations, or other terms or conditions of this permit.
- d. The Illinois EPA or USEPA determines that this permit must be revised or revoked to ensure compliance with the applicable requirements.

9.12.3 Inaccurate Application

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

9.12.4 Duty to Provide Information

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

9.13 Severability Clause

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

9.14 Permit Expiration and Renewal

Upon the expiration of this permit, if the source is operated, it shall be deemed to be operating without a permit unless a timely and complete CAAPP application has been submitted for renewal of this permit. However, if a timely and complete application to renew this CAAPP permit has been submitted, the terms and all conditions of this CAAPP permit will remain in effect until the issuance of a renewal permit [Section 39.5(5) (1) and (o) of the Act].

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

9.15 General Authority for the Terms and Conditions of this Permit

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

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

10.0 ATTACHMENTS

Attachment 1 Example Certification by a Responsible Official

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

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

Attachment 2 Emissions of Particulate Matter from Process Emission Units

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

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

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

where:

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

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

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

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

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

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

| Metric P <u>Mg/hr</u> | E <u>kg/hr</u> | English P <u>T/hr</u> | E <u>lb/hr</u> |
|-----------------------------|-------------------|-----------------------------|-------------------|
| 0.05 | 0.25 | 0.05 | 0.55 |
| 0.1 | 0.29 | 0.10 | 0.77 |
| 0.2 | 0.42 | 0.2 | 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 |

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

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

ii. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.321 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,

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

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

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

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

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

| Metric P <u>Mg/hr</u> | E <u>kg/hr</u> | English P <u>T/hr</u> | E <u>lb/hr</u> |
|-----------------------------|-------------------|-----------------------------|-------------------|
| 0.05 | 0.27 | 0.05 | 0.55 |
| 0.1 | 0.42 | 0.10 | 0.87 |
| 0.2 | 0.68 | 0.2 | 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 |

Attachment 3 Compliance Assurance Monitoring (CAM) Plan

There are no specific emission units that require a CAM plan as identified in the Monitoring Requirements of Subsection 8 for each Section 7, Unit Specific Conditions for Specific Emission Units.

Attachment 4 Guidance

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

Guidance On Revising A CAAPP Permit:

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

Guidance On Renewing A CAAPP Permit:

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

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

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

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

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

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

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

BUREAU OF AIR

DIVISION of AIR POLLUTION CONTROL

PERMIT SECTION

PROJECT SUMMARY for the
PROPOSED TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT

Caterpillar, Inc.
Box 348 Route 31
Aurora, Illinois 60507

Permit Engineer/Technical Contact: LeeAnne Kinsella, 217/782-2113

Community Relations/Comments Contact: Brad Frost, 217/782-7027

February/ 2005
Springfield, Illinois

I. INTRODUCTION

This source has applied for a renewal of the Title V - Clean Air Act Permit Program (CAAPP) operating permit (I.D. 093 807 AAB, Permit #95120094,) for its existing operation. The CAAPP is the program established in Illinois for operating permits for significant stationary sources as required by the federal Clean Air Act, as amended in 1990, and 40 CFR Part 70. Unlike state operating permits, the conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA. This document is for informational purposes only and does not shield the Permittee from enforcement actions or its responsibility to comply with applicable regulations. This document shall not constitute a defense to a violation of the Act or any rule or regulation.

A Title V permit contains conditions listing the applicable state and federal air pollution control regulations that apply to a source. The permit conditions also establish emission limits, appropriate compliance procedures, and specific operational flexibility. The appropriate compliance procedures may include monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the source is operating in accordance with the requirements of the permit.

This renewal permit has been revised to reflect the removal of shot blast equipment, grinders, heat treatment equipment and incinerator with waste heat boilers. The three coal fired boilers have been removed and a natural gas cogeneration facility has been added. The paint booths have been combined to one section instead of three separate sections. Emission units that were incorrectly considered significant emission units, removed from significant sections to the insignificant part of the permit.

II. SOURCE DESCRIPTION INFORMATION

a. Location and Nature of Business

Caterpillar, Inc. is located on Route 31 in Aurora. This source manufactures heavy off-highway equipment for earthmoving activities. Caterpillar's product line consists of large and medium wheel loaders, excavators, compactors and log skidders. The operations at this source include fabrication, welding and assembly. The source receives some parts for assembly and unfinished for fabrication and other operations. During fabrication the parts go through various operations including alkaline cleaning and coating, air drying, drilling, milling, welding, brazing, cutting, pressing into shape and painting of the final product.

b. National Ambient Air Quality Standard Status for this Area

This source is located in an area that is in non-attainment of the National Ambient Air Quality Standards for ozone and attainment for all other pollutants.

c. Major Source Status

The proposed permit is based on:

1. The source requiring a CAAPP permit as a major source of Hap, NO_x SO₂ and VOM emissions.

d. Significant Emission Units

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|---------------|--|----------------------|-----------------------------------|
| M1332 | Touch Up Paint Booth M1332 | August, 1980 | Paint Booth Filters (For PM Only) |
| M1884 | Top Coat Product Paint Booth M1884 with Drying Oven Rated 1.0mmBtu/hr | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| M3302 | Top Coat Product Paint Booth M3302 | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| M4703 | Touch Up Paint Booth M4703 | January, 1980 | Paint Booth Filters (For PM Only) |
| M5794 | Touch Up Paint Booth M5794 | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| 6516 | Touch Up Paint Booth 6516 | After April 14, 1972 | Paint Booth Filters (For PM Only) |
| CGF | 2 Natural Gas Combined Cycle Turbines with Fuel Oil #2 as Backup Rated: 73.41 mmBtu/Hr Each (7MW Each) | August, 2001 | None |
| CGF | 2 Natural Gas Duct Burners Rated: 112.2 mmBtu/Hr (Each) | August, 2001 | None |
| CGF | 1 #2 Diesel Fuel Emergency Generator Rated: 12 mmBtu/Hr (Peak Load: 1,650 kW) | 1989 | None |
| B4 | #4 Natural Gas Boiler with No. 2 Fuel Oil Backup Rated: 176.3 mmBtu/Hr | 1967 | None |
| B5 | #5 Natural Gas Boiler with No. 2 Fuel Oil Backup Rated: 176.3 mmBtu/Hr | 1967 | None |
| SRU | Solvent Reclamation Unit | September, 1995 | None |

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|---------------|---|------------------|----------------------------|
| GT1 | Gasoline Tank #1 12,000 Gallons) with Submerged Loading Pipe | May, 1987 | None |

III. EMISSIONS INFORMATION

The proposed permit limits the source wide maximum annual emissions from significant emission units at the source. Insignificant activities at this source are not accounted for in the source-wide limit. Further unit specific emission unit limitations are found within Sections 5 and 7 of the proposed permit.

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

| Pollutant | Tons/Year |
|------------------------------------|-----------|
| Volatile Organic Material (VOM) | 500 |
| Sulfur Dioxide (SO ₂) | 443 |
| Particulate Matter (PM) | 115 |
| Nitrogen Oxides (NO _x) | 374 |
| HAP, not included in VOM or PM | ---- |
| Total | 1,432 |

This proposed permit contains terms and conditions that address the applicability, and, if determined applicable, substantive requirements of Title I of the Clean Air Act (CAA) and regulations promulgated thereunder, including 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and 35 IAC Part 203, Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within the proposed permit by T1, T1R, or T1N. Any conditions established in a construction permit [T1] pursuant to Title I and not revised or deleted in this proposed permit, remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them. Where the source has requested that the Illinois EPA establish new [T1N] or revise [T1R] such conditions in a Title I permit, those conditions are consistent with the information provided in the Title V application and will remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them.

This proposed permit does not establish any new [T1N] requirements or revised [T1R] requirements.

IV. EMISSIONS CONTROL PROGRAMS INFORMATION

a. Emissions Reduction Market System (ERMS)

Because this source is located in the Chicago ozone non-attainment area and emits volatile organic material (VOM), the proposed permit includes conditions to implement the Emissions Reduction Market System (ERMS). The ERMS is a market-based program designed to reduce VOM emissions from stationary sources to contribute to

reasonable further progress toward attainment, as further described in Section 6.0 of the proposed permit. The proposed permit contains the Illinois EPA's determination of the source's baseline emissions and allotment of trading units under the ERMS, and identifies units not subject to further reductions.

V. COMPLIANCE ASSURANCE MONITORING (CAM) PLAN INFORMATION

The Compliance Assurance Monitoring (CAM) plan is a program for pollutant-specific emission units which use an add-on control device to achieve compliance with an emission limitation or standard, has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than major source threshold levels, and is not specifically exempt by 40 CFR Part 64. There are no specific emission units that require a CAM plan as identified in the Monitoring Requirements of Subsection 8 for each Section 7, Unit Specific Conditions for Specific Emission Units.

VI. OTHER PERTINENT INFORMATION

a. Risk Management Plan (RMP)

A risk management plan (RMP) is a program required for a source affected by Chemical Accident Prevention for reducing the levels of emissions during an emergency, consistent with safe operating procedures. If the Permittee becomes subject to the RMP then the Permittee would be required to immediately implement the appropriate steps described in this plan should an emergency be declared. The Permittee then would be required to maintain and have this plan on file with the Illinois EPA.

b. Episode Action Plan (EAP)

An episode action plan (EAP) is a program for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The Permittee is required to immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared. The Permittee is required to maintain and have this plan on file with the Illinois EPA.

VII. COMPLIANCE INFORMATION

The source has certified compliance with all applicable rules and regulations; therefore, a compliance schedule is not required for this source.

VIII. REQUEST FOR COMMENTS

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

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