217/782-2113

REVISED
TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT[1]

PERMITTEE

International Truck and Engine Corporation
Attn: Sanjay Patel
10400 West North Avenue
Melrose Park, Illinois 60160

Application No.: 95080106 I.D. No.: 031186ABK
Applicant's Designation: Date Received: December 1, 2003
Operation of: Diesel Engine Manufacturing
Date Issued: December 20, 2005 Expiration Date[2]: December 20, 2010
Source Location: 10400 West North Avenue, Melrose Park, Cook County
Responsible Official: Tim Deany, Plant Manager

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

Revision Date Received: February 13, 2007
Revision Date Issued:
Purpose of Revision: Minor Modification

This minor modification consists of the following: changes in the quantity of Engineering Test Cells in Unit 7.10 in the Table of Contents from 15 to 9. The same change applied to Condition 6.8(b) and 7.10.3(a). Language from Construction Permit 04110032 for Next Generation Test Cells has been incorporated as Section 7.13.

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

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

ECB:SIS:psj

cc: Illinois EPA, FOS, Region 1
CES
Lotus Notes
International Truck and Engine Corp.
10400 West North Avenue
Melrose Park, Illinois 60160

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

International Truck and Engine Corporation
10400 West North Avenue
Melrose Park, Illinois 60160
708/865-4359 or 708/865-3327

I.D. No.: 031186ABK
Standard Industrial Classification: 3519, Engines - Internal Combustion

1.2 Owner/Parent Company

International Truck and Engine Company
4201 Winfield Road
Post Office Box 1488
Warrenville, Illinois 60555

1.3 Operator

International Truck and Engine Company
10400 West North Avenue
Melrose Park, Illinois 60160

Sanjay Patel or Zachary Fijal
708/865-4359 or 708/865-3327

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

ACMA	Alternative Compliance Market Account
Act	Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollution 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 27717
ATU	Allotment Trading Unit
Ave.	Average
Btu	British thermal unit
°C	degrees Celsius
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CFR	Code of Federal Regulations
cm	centimeter
CO	Carbon Monoxide
ERMS	Emission Reduction Market System
°F	degrees Fahrenheit
FIRE	Factor Information Retrieval System, Version 5.0, Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants (EPA-454/R-95-012), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27717
g	gram
gal	gallon
HAP	Hazardous Air Pollutants
hp	horsepower
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
in	inch
IPCT	Industrial Process Cooling Tower
kg	kilogram
kPa	kilopascal
kW	kilowatt
kW-hr	kilowatt hour
l	liter
lb	pound
Mft^3	Million cubic feet
Mg	Metric Tonnes or Megagram
mmBtu	Million Btus
mmHg	millimeters of Mercury
mo	month
MW	Megawatt
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
ppm	parts per million
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
SCC	Source Classification Code
SO_2	Sulfur Dioxide
T	Ton
T1	Title I – identifies Tile I conditions that have been carried over from an existing permit
T1N	Title I N – 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
wk	week
wt.	Weight
yr	year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

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

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

Wet Abrasive Saw
Wheelabrator with Dust Collector
Shot Blaster with Dust Collector
Carpenter Shop Woodworking Equipment with Rotoclones
NGD Machinery with Cycoils
Storage Tanks in Tank Farm Shed
Grinders with Rotoclones
Cooling Towers
Maintenance Paint Booth
Welding/Brazing
Three Stage Washer
2.9 mmBtu/Hr Natural Gas-Fired Space Heaters

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:

Process Machinery with Mist Collectors
Parts Washers
Maintenance Welding

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

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 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)].

Extruders used for the extrusion of metals, minerals, plastics, rubber, or wood, excluding extruders used in the manufacture of polymers, provided that volatile organic materials or class I or II substances subject to the requirements of Title VI of the CAA are not used as foaming agents or release agents or were not used as foaming agents

in the case of extruders processing scrap material [35 IAC 201.210(a)(5)].

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

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

Storage tanks of any size containing 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)].

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

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

3.2 Compliance with Applicable Requirements

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

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

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

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 218.301 which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

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

3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a)and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.

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

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
PB1	Binks Paint Spray Booth (Paint Booth #1)	Prior to 1970	Water Curtain
PB2	George Koch & Sons, Inc. Paint Spray Booth (Paint Booth #2)	February, 1995	Water Curtain
DOO	George Koch & Sons, Inc. Dry-Off Oven (Dry-Off Oven)	February, 1995	None
2SDO	George Koch & Sons, Inc. Two Stage Drying Oven (Two Stage Drying Oven)	February, 1995	None
B1	Stone Johnson Boiler (Boiler #1)	October, 1988	None
B2	Stone Johnson Boiler (Boiler #2)	October, 1988	None
B3	Stone Johnson Boiler (Boiler #3)	October, 1988	None
NGDDF	Lanley Draw Furnace (NGD Crankshaft Draw Furnace)	April, 1992	None
L-3	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
L-6	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
L-9	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
L-13	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
BB-3	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
BB-8	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
BB-12	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
N-18	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
G-12	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
G-8	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None
G-4	Rapid Model 3073 Natural Gas Fired Space Heater (8.25 mmBtu/Hr)	November, 1987	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
BB-7	Rapid Model SR66 Natural Gas Fired Space Heater (6.25 mmBtu/Hr)	November, 1987	None
B-23	Rapid Model 3060 Natural Gas Fired Space Heater (4.25 mmBtu/Hr)	November, 1987	None
10-E	Rapid Model 3049 Natural Gas Fired Space Heater (3.25 mmBtu/Hr)	November, 1987	None
A-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
C-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
D-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
E-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
F-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
G-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
H-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
I-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
I-16	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
G-24	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
K-15	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
K-18	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	May, 1971	None
AA-21-3	Hartzell Model G-2512 Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	November, 1970	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
AA-21-4	Hartzell Model G-2512 Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	November, 1970	None
D-2	Hartzell Model G-259 Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	November, 1970	None
H-2	Hartzell Model G-259 Natural Gas Fired Space Heater (2.5 mmBtu/Hr)	November, 1970	None
L-9	Devilbliss Model ARG-50 Natural Gas Fired Space Heater (5.2 mmBtu/Hr)	January, 1970	None
AA-17	Devilbliss Model ARG-50 Natural Gas Fired Space Heater (5.2 mmBtu/Hr)	January, 1970	None
L-13-0	Devilbliss Model ARG-50 Natural Gas Fired Space Heater (5.2 mmBtu/Hr)	January, 1970	None
L-13-3	Devilbliss Model ARG-50 Natural Gas Fired Space Heater (5.2 mmBtu/Hr)	January, 1970	None
ETC	79 Engine Test Cells	Prior to 1970	None
COGEN	12 Caterpillar Model G3516SITA Natural Gas Spark Ignition Reciprocating Engines	July, 1992	3-Way Catalytic Converters (12)
EETC	9 Engineering Engine Test Cells	1998	None
TG	13,488,800 Btu/Hr Caterpillar Model #3516 #2 Fuel Oil Fired Internal Combustion Engine (Temporary Generator)	September, 1999	None
CPC	Cold Parts Cleaning Operations	Pre 1980	None

5.0 OVERALL SOURCE CONDITIONS

5.1 General Source Description

5.1.1 International Truck and Engine Corp. is located at 10400 West North Avenue in Melrose Park. The source is an assembly plant for diesel engines. After assembly each engine is tested for durability and performance in any of International's several computerized engine test cells. The source also engages in research and development of diesel engine. Diesel engine development and testing is conducted in 70 such engine test cells, other test cells are audit test cells. In addition, International operates a cogeneration system to supply energy for peak demand periods at the plant.

5.1.2 This source is located in an area that is in non-attainment of the National Ambient Air Quality Standards for ozone, PM_{10} and $PM_{2.5}$ 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 CO, NO_x, 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 Fugitive Particulate Matter Operating Program

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

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

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

5.3.4 Ozone Depleting Substances

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

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

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

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

5.3.5 Risk Management Plan (RMP)

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

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

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

5.3.6 Future Emission Standards

a. Should this stationary source become subject to a 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.

5.3.7 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.

d. A copy of the original plan and any subsequent revisions shall also be sent to the Cook County Department of Environmental Control.

5.3.8 PM_{10} Contingency Measure Plan

Should this stationary source fulfill the criteria in 35 IAC 212.700 and become subject to the requirement to prepare and submit a contingency measure plan reflecting the PM_{10} emission reductions as set forth in 35 IAC 212.701 and 212.703, then the Permittee shall submit such plan to the Illinois EPA for review and approval within ninety (90) days after the date this source becomes subject to this requirement. Such plan will be incorporated by reference into this permit and shall be implemented by the Permittee in accordance with 35 IAC 212.704 following notification by the Illinois EPA. The source shall comply with the applicable requirements of 35 IAC Part 212, Subpart U, incorporated herein by reference.

5.4 General Non-Applicability of Regulations of Concern

5.4.1 This permit is issued based on the source not being subject to the NESHAP for Industrial Process Cooling Towers 40 CFR 63, Subpart Q, because the industrial process cooling towers are not operated with chromium-based water treatment chemicals.

5.4.2 This permit is issued based on the source not being subject to the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, because the cogen units located at this facility are not located at a major source of HAP emissions as the applicability of the rule requires.

5.4.3 This permit is issued based on the source not being subject to the NESHAP National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands 40 CFR 63, Subpart PPPPP, because the engine test cells at this facility are not located at a major source of HAP emissions as the applicability of the rule requires.

5.4.4 This permit is issued based on the source not being subject to the NESHAP National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, CFR 63, Subpart DDDDD, due to the following: the boilers at this facility are not located at a major source of HAP emissions as the applicability of the rule requires, and the space heaters (as indicated so by the application for the permit) do not meet the definition of process heaters per 40 CFR 63.7575.

5.4.5 This permit is issued based on the source not being subject to the NESHAP National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63, Subpart MMMM, because the paint spray booths at this facility are not located at a major source of HAP emissions as the applicability of the rule requires.

5.4.6 his permit is issued based on the source not being subject to the NESHAP National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty

Trucks, 40 CFR 63, Subpart IIII, because the paint spray booths at this facility are not located at a major source of HAP emissions as the applicability of the rule requires, and they are not engaged in applying topcoat to new automobile or new light-duty truck bodies or body parts for new automobiles or new light-duty trucks as the applicability of this rule requires.

5.5 General Source-Wide Control Requirements and Work Practices

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

No owner or operator of an IPCT shall use chromium-based water treatment chemicals in any affected IPCT.

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

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Nitrogen Oxides (NO_x)	395.15
Particulate Matter (PM)	18.44
Sulfur Dioxide (SO_2)	6.74
Volatile Organic Material (VOM)	106.15
HAP, not included in VOM or PM	
Total	526.48

5.6.2 Emissions of Hazardous Air Pollutants

This permit is issued based on the emissions of HAPs as listed in Section 112(b) of the CAA not being equal to or exceeding 10 tons per year of a single HAP or 25 tons per year of any combination of such HAPs, so that this source is considered a minor source for HAPs.

5.6.3 Other Source-Wide Emission Limitations

None

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.

5.7.2 HAP Testing to Verify Minor Source Status

Pursuant to Condition 5.7.1 and to verify compliance with the requirements of Condition 5.6.2, that is that this source is not a major source of HAPs, the following testing requirements are established:

a. If in the previous calendar year, emissions of HAPs exceeded 80% of major source threshold for individual and total HAPs (greater than 8 tons of a single HAP and greater than 20 tons of total HAPs), then testing for HAPs using USEPA Method 311 shall be conducted as follows:

Test the top five coatings that make the largest contributions to individual and total HAP emissions. The largest contributions are defined as the product of usage and HAP content. If two coatings differ only in pigment, then both do not have to be tested.

Test the material(s) that contribute to individual and total HAP emissions.

b. Testing may be conducted by the supplier of the HAP-containing material.

c. The calculation as to whether the 80% of major source threshold was exceeded shall be based on records and procedures in Condition 5.9.2 and shall be completed by January 31 for the previous calendar year. If testing is required it shall be completed by March 15.

d. 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 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.6.1 pursuant to Section 39.5(7)(b) of the Act:

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

5.9.2 General Records for IPCT's

To demonstrate continuing compliance with Condition 5.4.1 (see also 40 CFR 63.402), the owner or operator of each affected IPCT shall maintain copies of the initial notification and the notification of compliance status as required by 40 CFR 63.405 for a period of at least 5 years onsite [40 CFR 63.406(a)].

5.9.3 Records for Storage Vessels

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)].

5.9.4 Retention and Availability of Records

a. All records and logs required by this permit shall be retained for at least five years from the date of entry

(unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

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

5.10 General Reporting Requirements

5.10.1 General Source-Wide Reporting Requirements

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

Annual emissions from the source in excess of the emission limits specified in Condition 5.6.1 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

5.10.2 Annual Emissions Report

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

5.11 General Operational Flexibility/Anticipated Operating Scenarios

N/A

6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

6.1 Description of ERMS

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

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. 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 emissions reductions from stationary sources required for reasonable further progress.

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

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

6.2 Applicability

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

6.3 Obligation to Hold Allotment Trading Units (ATUs)

a. Pursuant to 35 IAC 205.150(c)(1) and 35 IAC 205.720, and as further addressed by Condition 6.8, as of December 31 of each year, this source shall hold ATUs in its account in an amount not less than the ATU equivalent of its VOM emissions during the preceding seasonal allotment period (May 1 - September 30), not including VOM emissions from the following, or the source shall be subject to "emissions excursion compensation," as described in Condition 6.5.

   i. VOM emissions from insignificant emission units and activities as identified in Section 3 of this permit, in accordance with 35 IAC 205.220;

   ii. Excess VOM emissions associated with startup, malfunction, or breakdown of an emission unit as authorized in Section 7.0 of this permit, in accordance with 35 IAC 205.225;

   iii. Excess VOM emissions to the extent allowed by a Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3);

   iv. Excess VOM emissions that are a consequence of an emergency as approved by the Illinois EPA, pursuant to 35 IAC 205.750; and

   v. VOM emissions from certain new and modified emission units as addressed by Condition 6.8(b), if applicable, in accordance with 35 IAC 205.320(f).

b. Notwithstanding the above condition, in accordance with 35 IAC 205.150(c)(2), if a source commences operation of a major modification, pursuant to 35 IAC Part 203, the source shall hold ATUs in an amount not less than 1.3 times its seasonal VOM emissions attributable to such major modification during the seasonal allotment period, determined in accordance with the construction permit for such major modification or applicable provisions in Section 7.0 of this permit.

6.4 Market Transactions

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

b. The Permittee shall promptly submit to the Illinois EPA any revisions to the information submitted for its Transaction Account, pursuant to 35 IAC 205.610(b).

c. The source shall have at least one account officer designated for its Transaction Account, pursuant to 35 IAC 205.620(a).

d. Any transfer of ATUs to or from the source from another source or general participant must be authorized by a qualified Account Officer designated by the source and approved by the Illinois

EPA, in accordance with 35 IAC 205.620, and the transfer must be submitted to the Illinois EPA for entry into the Transaction Account database.

6.5 Emissions Excursion Compensation

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

a. Upon receipt of an Excursion Compensation Notice issued by the Illinois EPA, the source shall purchase ATUs from the ACMA in the amount specified by the notice, as follows:

   i. The purchase of ATUs shall be in an amount equivalent to 1.2 times the emissions excursion; or

   ii. If the source had an emissions excursion for the seasonal allotment period immediately before the period for the present emissions excursion, the source shall purchase ATUs in an amount equivalent to 1.5 times the emissions excursion.

b. If requested in accordance with paragraph (c) below or in the event that the ACMA balance is not adequate to cover the total emissions excursion amount, the Illinois EPA will deduct ATUs equivalent to the specified amount or any remaining portion thereof from the ATUs to be issued to the source for the next seasonal allotment period.

c. Pursuant to 35 IAC 205.720(c), within 15 days after receipt of an Excursion Compensation Notice, the owner or operator may request that ATUs equivalent to the amount specified be deducted from the source's next seasonal allotment by the Illinois EPA, rather than purchased from the ACMA.

6.6 Quantification of Seasonal VOM Emissions

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

   No exceptions

b. The Permittee shall report emergency conditions at the source to the Illinois EPA, in accordance with 35 IAC 205.750, if the Permittee intends to deduct VOM emissions in excess of the technology-based emission rates normally achieved that are attributable to the emergency from the source's seasonal VOM emissions for purposes of the ERMS. These reports shall include the information specified by 35 IAC 205.750(a), and shall be submitted in accordance with the following:

i. An initial emergency conditions report within two days after the time when such excess emissions occurred due to the emergency; and

ii. A final emergency conditions report, if needed to supplement the initial report, within 10 days after the conclusion of the emergency.

6.7 Annual Account Reporting

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

i. Actual seasonal emissions of VOM from the source;

ii. A description of the methods and practices used to determine VOM emissions, as required by this permit, including any supporting documentation and calculations;

iii. A detailed description of any monitoring methods that differ from the methods specified in this permit, as provided in 35 IAC 205.337;

iv. If a source has experienced an emergency, as provided in 35 IAC 205.750, the report shall reference the associated emergency conditions report that has been approved by the Illinois EPA;

v. If a source's baseline emissions have been adjusted due to a Variance, Consent Order, or CAAPP permit Compliance Schedule, as provided for in 35 IAC 205.320(e)(3), the report shall provide documentation quantifying the excess VOM emissions during the season that were allowed by the Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3); and

vi. If a source is operating a new or modified emission unit for which three years of operational data is not yet available, as specified in 35 IAC 205.320(f), the report shall specify seasonal VOM emissions attributable to the new emission unit or the modification of the emission unit.

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

6.8 Allotment of ATUs to the Source

a. i. The allotment of ATUs to this source is 270 ATUs per seasonal allotment period.

ii. This allotment of ATUs reflects the Illinois EPA's determination that the source's baseline emissions were 29.3124 tons per season.

This determination includes adjustment to actual emissions to account for voluntary over-compliance at the source, e.g., Paint Booth #1, pursuant to 35 IAC 205.320(d) as further addressed in Section 7 of this permit.

iii. The source's allotment reflects 88% of the baseline emissions (12% reduction), except for the VOM emissions from specific emission units excluded from such reduction, pursuant to 35 IAC 205.405, including units complying with MACT or using BAT, as identified in Condition 6.11 of this permit.

iv. ATUs will be issued to the source's Transaction Account by the Illinois EPA annually. These ATUs will be valid for the seasonal allotment period following issuance and, if not retired in this season, the next seasonal allotment period.

v. Condition 6.3(a) becomes effective beginning in the seasonal allotment period following the initial issuance of ATUs by the Illinois EPA into the Transaction Account for the source.

b. Contingent Allotments for New or Modified Emission Units

The source was <u>not</u> issued a construction permit prior to January 1, 1998 for the following new or modified emission units:

Emission Unit	Construction Permit No.	Date Issued
9 Engineering Engine Test Cells	98070033	11/23/1998
Temporary Generator	99060064	7/16/1998

In accordance with 35 IAC Part 205, for the above referenced emission units, the source is required to hold the appropriate amount of ATUs for these emission units.

c. Notwithstanding the above, part or all of the above ATUs will not be issued to the source in circumstances as set forth in 35 IAC Part 205, including:

i. Transfer of ATUs by the source to another participant or the ACMA, in accordance with 35 IAC 205.630;

ii. Deduction of ATUs as a consequence of emissions excursion compensation, in accordance with 35 IAC 205.720; and

iii. Transfer of ATUs to the ACMA, as a consequence of shutdown of the source, in accordance with 35 IAC 205.410.

6.9 Recordkeeping for ERMS

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

a. Seasonal component of the Annual Emissions Report;

b. Information on actual VOM emissions, as specified in detail in Sections 5 and 7 of this permit and Condition 6.6(a); and

c. Any transfer agreements for the purchase or sale of ATUs and other documentation associated with the transfer of ATUs.

6.10 Federal Enforceability

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

6.11 Exclusions from Further Reductions

a. VOM emissions from the following emission units shall be excluded from the VOM emissions reductions requirements specified in 35 IAC 205.400(c) and (e) as long as such emission units continue to satisfy the following [35 IAC 205.405(a)]:

i. Emission units that comply with any NESHAP or MACT standard promulgated pursuant to the CAA;

ii. Direct combustion emission units designed and used for comfort heating purposes, fuel combustion emission units, and internal combustion engines; and

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

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

Boilers #1, #2, and #3
41 Natural Gas Fired Space Heaters
Engine Test Cells

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

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because these

emission units use BAT for controlling VOM emissions as indicated above [35 IAC 205.405(b) and (c)]:

None

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit: PB1 - Paint Booth #1
Control: WC1 - Water Curtain

7.1.1 Description

Paint is applied to an engine after it has been tested, washed, and dried. This paint booth is equipped with a water curtain for control of particulate matter emissions. The paint is heated in the drying oven, not included in this coating line, where the majority of the volatile solvents are evaporated and the paint is dried.

7.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
PB1	Binks Paint Spray Booth (Paint Booth #1)	Prior to 1970	Water Curtain

7.1.3 Applicability Provisions and Regulations

a. Paint Booth #1 is an "affected coating line" for the purpose of these unit-specific conditions.

b. The affected coating line is subject to the emission limits identified in Condition 5.6.1.

c. The affected coating line is subject to 35 IAC 212.322(a), which provides that:

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

ii. Because the expected process weight rate for the affected coating line is less than 100 pounds per hour, the allowable PM emission rate for the affected coating line set by 35 IAC 212.322 is 0.55 pounds per hour.

d. 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 Miscellaneous Metal Parts and Products/Extreme Performance/Baked Coating. The

following emission limitation is 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. 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 [35 IAC 218.204(j)(2)(B)]:

kg/l	lb/gal
0.40	3.3

7.1.4 Non-Applicability of Regulations of Concern

a. The affected coating line is not subject to the NSPS for Automobile and Light Duty Truck Surface Coating Operations, 40 CFR 60 Subpart MM because the affected coating line is not a prime coat operation, a guide coat operation, or a topcoat operation at an automobile or light-duty truck assembly plant.

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].

7.1.5 Control Requirements and Work Practices

The Permittee shall follow good operating practices for the water curtain, including periodic inspection, routine maintenance and prompt repair of defects.

7.1.6 Production and Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.6.1 that include this unit.

7.1.7 Testing Requirements

a. The VOM content of each coating shall be determined by the applicable test methods and procedures specified in 35 IAC 218.105 to establish the records required under Condition 7.1.7(b) (see also 35 IAC 218.211) [35 IAC 218.211(a)].

b. Annually, pursuant to Section 39.5(7)(b) of the Act, the VOM content of specific coatings and cleaning solvents used on the affected coating line shall be determined as follows:

i. The VOM content of representative coatings "as applied" on the affected coating line 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.

7.1.8 Monitoring Requirements

None

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 line 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 line 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 the 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 the affected coating line.

c. Records addressing use of good operating practices for the water curtain:

i. Records for periodic inspection of the water curtain 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. Coating usage, gal/day and gal/yr;

e. VOM content of coatings, % by wt;

f. Density of coatings, lb/gal;

g. The aggregate monthly and annual PM and VOM emissions from the affected coating line based on the operating schedule and the typical hourly emission rate, with supporting calculations; and

h. Process weight rate, lb/hr.

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected coating line 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. Pursuant to 35 IAC 218.211(c)(3)(A), the Permittee shall notify the Illinois EPA of any record showing violation of Condition 7.1.3(d) (see also 35 IAC 218.204) within 30 days following the occurrence of the violation.

b. Three days operation of the affected coating line with a defect in the water curtain that may result in emissions of particulate matter in excess of limits in Condition 7.1.3(c) within 30 days of such an occurrence.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

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

The Permittee may switch vendor and/or color of the coating used on the affected coating line as long as VOM emissions do not exceed the limits specified in Conditions 5.6.1and 7.1.3(d).

7.1.12 Compliance Procedures

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

a. Compliance with Condition 7.1.3(c) is assumed by proper operation of the water curtain, as addressed by Condition 7.1.5 and by the calculation of the Process Weight Rate (condition 7.1.9(h).

b. To determine compliance with Condition 5.6.1, emissions from the affected coating line shall be calculated based on the following:

   i. Volatile Organic Material Emissions:

      VOM (lb) = (Coating Usage, gal) x (VOM Content of Coating, % by Wt) x (Coating Density, lb/gal)

   ii. Particulate Matter Emissions:

      PM (lb) = (Wt of Coating Used, lb) x (Wt % Solids) x [1 - (Transfer Efficiency* (%)/100)] x [1 - (Water Curtain Efficiency* (%)/100)]

      * As specified by manufacturer or vendor of the spray booth and water curtain

7.2 Unit: PB2 - Paint Booth #2
Control: WC2 - Water Curtain

7.2.1 Description

Paint is applied to an engine after it has been tested, washed, and dried. This paint booth is equipped with a water curtain for control of particulate matter emissions. The paint booth is equipped with a make-up air heater, which uses natural gas as the fuel.

7.2.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
PB2	George Koch & Sons, Inc. Paint Spray Booth (Paint Booth #2)	February, 1995	Water Curtain

7.2.3 Applicable Provisions and Regulations

a. Paint Booth #2 is an "affected coating line" for the purpose of these unit-specific conditions.

b. The affected coating line is subject to the emission limits identified in Condition 5.2.2.

c. The affected coating line is 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)].

ii. Because the expected process weight rate for the affected coating line is 106 pounds per hour, the allowable PM emission rate for the affected coating line set by 35 IAC 212.321 is 0.53 pounds per hour.

d. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm (applicable for make-up air heater) [35 IAC 214.301].

e. 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 Miscellaneous Metal Parts and Products/Extreme Performance/Baked Coating. The following emission limitation is 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. 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 [35 IAC 218.204(j)(2)(B)]:

kg/l	lb/gal
0.40	3.3

7.2.4 Non-Applicability of Regulations of Concern

a. The affected coating line is not subject to the NSPS for Automobile and Light Duty Truck Surface Coating Operations, 40 CFR 60 Subpart MM because the affected coating line is not a prime coat operation, a guide coat operation, or a topcoat operation at an automobile or light-duty truck assembly plant.

b. The make-up air heater 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 make-up air heater is not by definition a fuel combustion emission unit.

c. The make-up air heater on the affected coating line is not subject to 35 IAC 217.121, emissions of nitrogen oxides from new fuel combustion emission sources, because the actual heat input is less than 73.2 MW (250 mmBtu/hr) and the make-up air heater is not by definition a fuel combustion emission unit.

d. 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].

7.2.5 Control Requirements and Work Practices

a. The Permittee shall follow good operating practices for the water curtain, including periodic inspection, routine maintenance and prompt repair of defects.

b. The make-up air heater shall only be operated with natural gas as the fuel.

c. This permit is issued based on the cleaning solvents used on the affected coating line containing no VOM.

7.2.6 Production and Emission Limitations

In addition to Condition 5.3 and the source wide emission limitations in Condition 5.6, the affected coating line is subject to the following:

a. Emissions and operation of paint spray booth (Line #2) shall not exceed the following limits:

i. Paint Usage and Emissions:

Paint Usage (gal/mo)	Paint Usage (gal/yr)	VOM Content (lb/gal)	VOM Emissions (t/mo)	VOM Emissions (t/yr)	PM Emissions (lb/hr)	PM Emissions (t/yr)
6,007	36,044	1.35	4.05	24.33	0.42	0.25

ii. These limits are based on the maximum paint usage and the maximum VOM content of the coatings. Note: The above VOM content limit includes water and exempt compounds.

iii. The above limitations were established in Permits 94120009 and 98070033, pursuant to 35 IAC Part 203. These limits ensure that the construction and/or modification addressed in the aforementioned permits does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

iv. The VOM emission units with contemporaneous VOM emissions are described in Table 1 of Attachment 3. The emission units or activities used to decrease emissions are described in Table 2 of Attachment 3. The net change in VOM emissions is described in Table 3 of Attachment 3.

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

Item of Equipment	Fuel Usage (Mft^3/mo)	Fuel Usage (Mft^3/yr)	NO_x Emissions (ton/mo)	NO_x Emissions (ton/yr)	CO Emissions (ton/mo)	CO Emissions (ton/yr)
Paint Booth	4.8	28.4	0.24	1.42	0.20	1.20

i. These limits are based on standard emission factors, the type of fuel, and the maximum fuel usage.

ii. The above limitations contain revisions to previously issued Permit 94120009. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent

with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the emission limit for CO has been increased based on a revised AP-42 emission factor and the production limitations have been switched from the maximum firing rate and maximum hours of operation of the unit to the maximum monthly and annual fuel usage rates [T1R].

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

7.2.7 Testing Requirements

a. The VOM content of each coating shall be determined by the applicable test methods and procedures specified in 35 IAC 218.105 to establish the records required under Condition 7.2.7(b) (see also 35 IAC 218.211) [35 IAC 218.211(a)].

b. Annually, pursuant to Section 39.5(7)(b) of the Act, the VOM content of specific coatings and cleaning solvents used on the affected coating line shall be determined as follows:

i. The VOM content of representative coatings "as applied" on the affected coating line 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 7.2.9(b) directly reflect the application of such material and separately account for any additions of solvent.

7.2.8 Monitoring Requirements

None

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 coating line to demonstrate compliance with Conditions 5.6.1, 7.2.3, and 7.2.6 pursuant to Section 39.5(7)(b) of the Act:

a. Records of the testing of VOM content of coatings pursuant to Condition 7.2.7, 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 line 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 the 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 the affected coating line.

c. Records addressing use of good operating practices for the water curtain:

   i. Records for periodic inspection of the water curtain 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. Coating usage, gal/day and gal/yr;

e. VOM content of coatings, lb/gal (including water and exempt compounds);

f. Records of the fuel usage for the make-up air heater, Mft^3/mo and Mft^3/yr;

g. The aggregate monthly and annual PM and VOM emissions from the affected coating line based on the operating schedule and the typical hourly emission rate, with supporting calculations; and

h. Records of monthly and annual aggregate CO, NO_x, PM, SO_2, and VOM emissions from the make-up air heater shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected coating line 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. Pursuant to 35 IAC 218.211(c)(3)(A), the Permittee shall notify the Illinois EPA of any record showing violation of Condition 7.2.3(e) (see also 35 IAC 218.204) within 30 days following the occurrence of the violation.

b. Three days operation of the affected coating line with a defect in the water curtain that may result in emissions of particulate matter in excess of limits in Condition 7.2.3(c) within 30 days of such an occurrence.

c. The usage of any solvent containing VOM within 30 days of such an occurrence.

d. Emissions of VOM in excess of the limits in Condition 7.2.6(a) based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

e. Emissions of NO_x and/or CO in excess of the limits in Condition 7.2.6(b) based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

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

The Permittee may switch vendor and/or color of the coating used on the affected coating line as long as VOM emissions do not exceed the limits specified in Conditions 5.5 and 7.2.3(e).

7.2.12 Compliance Procedures

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

a. Compliance with Condition 7.2.3(c) is assumed by proper operation of the water curtain, as addressed by Condition 7.2.5.

b. Compliance with Condition 7.2.3(d) is assumed by the work-practices inherent in operation of a natural gas-fired drying oven.

c. To determine compliance with Condition 5.6.1 and 7.2.6, emissions from the affected coating line shall be calculated based on the following:

i. Volatile Organic Material Emissions:

VOM (lb) = (Coating Usage, gal) x (VOM Content of Coating, lb/gal)

ii. Particulate Matter Emissions:

PM (lb) = (Wt of Coating Used, lb) x (Wt % Solids) x [1 - (Transfer Efficiency* (%)/100)] x [1 - (Water Curtain Efficiency* (%)/100)]

* As specified by manufacturer or vendor of the spray booth and water curtain

d. To determine compliance with Conditions 5.5.1 and 7.2.6(b), fuel combustion emissions from the make-up air heater on the affected coating line shall be calculated based on the following emission factors:

Pollutant	Emission Factor (lb/Mft^3)
CO	84
NO_x	100
PM	7.6
SO_2	0.6
VOM	5.5

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

Make-Up Air Heater Emissions (lb) = (Natural Gas Consumed, Mft^3) x (The Appropriate Emission Factor, lb/Mft^3)

7.3 Unit: DOO - Dry-Off Oven

7.3.1 Description

The dry-off oven is used to dry the engines after they have been washed in the three stage washer. Emissions from this unit will be due to the byproducts of natural gas fuel combustion.

7.3.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
DOO	George Koch & Sons, Inc. Dry-Off Oven (Dry-Off Oven)	February, 1995	None

7.3.3 Applicable Provisions and Regulations

a. The dry-off oven is an "affected dry-off oven" for the purpose of these unit-specific conditions.

b. The affected dry-off oven is subject to the emission limits identified in Condition 5.6.1.

c. The dry-off oven is 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)].

ii. Because the expected process weight rate for the affected dry-off oven is less than 100 pounds per hour, the allowable PM emission rate for the affected dry-off oven set by 35 IAC 212.321 is 0.55 pounds per hour.

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

e. 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 35 IAC 218

Subpart G shall apply only to photochemically reactive material [35 IAC 218.301].

7.3.4 Non-Applicability of Regulations of Concern

a. The affected dry-off oven 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 affected dry-off oven is not by definition a fuel combustion emission unit.

b. The affected dry-off oven is not subject to 35 IAC 217.121, emissions of nitrogen oxides from new fuel combustion emission sources, because the actual heat input is less than 73.2 MW (250 mmBtu/hr) and the affected dry-off oven is not by definition a fuel combustion emission unit.

7.3.5 Control Requirements and Work Practices

The affected dry-off oven shall only be operated with natural gas as the fuel.

7.3.6 Production and Emission Limitations

In addition to Condition 5.3 and the source wide emission limitations in Condition 5.6, the affected dry-off oven is subject to the following:

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

Item of Equipment	Fuel Usage (Mft^3/mo)	Fuel Usage (Mft^3/yr)	NO_x Emissions (ton/mo)	NO_x Emissions (ton/yr)	CO Emissions (ton/mo)	CO Emissions (ton/yr)
Dry-Off Oven	1.4	8.8	0.07	0.44	0.06	0.36

i. These limits are based on standard emission factors, the type of fuel, and the maximum fuel usage.

ii. The above limitations contain revisions to previously issued Permit 94120009. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification

pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the emission limit for CO has been increased based on a revised AP-42 emission factor and the production limitations have been switched from the maximum firing rate and maximum hours of operation of the unit to the maximum monthly and annual fuel usage rates [T1R].

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

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

None

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected dry-off oven to demonstrate compliance with Conditions 5.5.1, 7.3.3, and 7.3.6 pursuant to Section 39.5(7)(b) of the Act:

a. Records of the fuel usage for the affected dry-off oven, Mft^3/mo and Mft^3/yr; and

b. Records of monthly and annual aggregate CO, NO_x, PM, SO_2, and VOM emissions from the affected dry-off oven shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.3.10 Reporting Requirements

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

Emissions of NO_x and/or CO in excess of the limits in Condition 7.3.6 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

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

a. Compliance with Condition 7.3.3 is assumed by the work-practices inherent in operation of a natural gas-fired dry-off oven.

b. To determine compliance with Conditions 5.5.1 and 7.3.6, fuel combustion emissions from the affected dry-off oven shall be calculated based on the following emission factors:

Pollutant	Emission Factor (lb/Mft^3)
CO	84
NO_x	100
PM	7.6
SO_2	0.6
VOM	5.5

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

Dry-Off Oven Emissions (lb) = (Natural Gas Consumed, Mft^3) x (The Appropriate Emission Factor, lb/Mft^3)

7.4 Unit: 2SDO - Two Stage Drying Oven

7.4.1 Description

The two stage drying oven is used to dry the engines after they have been painted in one of the two paint booths. Emissions from this unit will be due to byproducts of natural gas fuel combustion.

7.4.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
2SDO	George Koch & Sons, Inc. Two Stage Drying Oven (Two Stage Drying Oven)	February, 1995	None

7.4.3 Applicable Provisions and Regulations

a. The two stage drying oven is an "affected drying oven" for the purpose of these unit-specific conditions.

b. The affected drying oven is subject to the emission limits identified in Condition 5.6.

c. The affected drying oven is 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)].

   ii. Because the expected process weight rate for the affected drying oven is less than 100 pounds per hour, the allowable PM emission rate for the affected drying oven set by 35 IAC 212.321 is 0.55 pounds per hour.

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

e. 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 35 IAC 218 Subpart G shall apply only to photochemically reactive material [35 IAC 218.301].

7.4.4 Non-Applicability of Regulations of Concern

a. The affected drying oven 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 affected drying oven is not by definition a fuel combustion emission unit.

b. The affected drying oven is not subject to 35 IAC 217.121, emissions of nitrogen oxides from new fuel combustion emission sources, because the actual heat input is less than 73.2 MW (250 mmBtu/hr) and the affected drying oven is not by definition a fuel combustion emission unit.

7.4.5 Control Requirements and Work Practices

The affected drying oven shall only be operated with natural gas as the fuel.

7.4.6 Production and Emission Limitations

In addition to Condition 5.3 and the source wide emission limitations in Condition 5.6, the affected drying oven is subject to the following:

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

Item of Equipment	Fuel Usage (Mft^3/mo)	Fuel Usage (Mft^3/yr)	NO_x Emissions (ton/mo)	NO_x Emissions (ton/yr)	CO Emissions (ton/mo)	CO Emissions (ton/yr)
Two Stage Drying Oven	3.0	17.2	0.15	0.88	0.12	0.72

These limits are based on standard emission factors, the type of fuel, the maximum firing rate, and the maximum fuel usage.

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

c. The above limitations contain revisions to previously issued Permit 94120009. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA,

specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the firing rate has been increased from 1.00 mmBtu/hr to 2.00 mmBtu/hr and the emission limit for CO has been increased based on a revised AP-42 emission factor and the production limitations have been switched from the maximum firing rate and maximum hours of operation of the unit to the maximum monthly and annual fuel usage rates [T1R].

7.4.7 Testing Requirements

None

7.4.8 Monitoring Requirements

None

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected drying oven to demonstrate compliance with Conditions 5.5.1, 7.4.3, and 7.4.6 pursuant to Section 39.5(7)(b) of the Act:

a. Records of the fuel usage for the affected drying oven, Mft^3/mo and Mft^3/yr; and

b. Records of monthly and annual aggregate CO, NO_x, PM, SO_2, and VOM emissions from the affected drying oven shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.4.10 Reporting Requirements

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

Emissions of NO_x and/or CO 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

N/A

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:

a. Compliance with Condition 7.4.3 is assumed by the work-practices inherent in operation of a natural gas-fired drying oven.

b. To determine compliance with Conditions 5.5.1 and 7.4.6, fuel combustion emissions from the affected drying oven shall be calculated based on the following emission factors:

Pollutant	Emission Factor (lb/Mft^3)
CO	84
NO_x	100
PM	7.6
SO_2	0.6
VOM	5.5

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

Drying Oven Emissions (lb) = (Natural Gas Consumed, Mft^3) x (The Appropriate Emission Factor, lb/Mft^3)

7.5 Units: B1, B2, B3 - Boilers #1, #2, and #3

7.5.1 Description

Boilers are utilized to provide process steam and heat to the plant. The boilers are each identical and are fired with natural gas. Emissions from the boilers are the byproducts of fuel combustion from either natural gas.

7.5.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Rated Heat Input
B1	Stone Johnson Boiler (Boiler #1)	October, 1988	32.4 mmBtu/hr
B2	Stone Johnson Boiler (Boiler #2)	October, 1988	32.4 mmBtu/hr
B3	Stone Johnson Boiler (Boiler #3)	October, 1988	32.4 mmBtu/hr

7.5.3 Applicable Provisions and Regulations

a. Boilers #1, #2, and #3 are "affected boilers" for the purpose of these unit-specific conditions.

b. Each affected boiler is subject to the emission limits identified in Condition 5.6.

c. No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission unit 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].

d. 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].

7.5.4 Non-Applicability of Regulations of Concern

a. The NSPS for Small-Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, applies to units for which construction, modification or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity of 29 MW (100 mmBtu/hr) or less, but greater than or equal to 2.9 MW (10 mmBtu/hr). The affected boilers were constructed in 1988, therefore, these rules do not apply.

b. The affected boilers are not subject to 35 IAC 217.121, emissions of nitrogen oxides from new fuel combustion

emission sources, because the actual heat input of is less than 73.2 MW (250 mmBtu/hr).

c. Pursuant to 35 IAC 218.303, fuel combustion emission units are not subject to 35 IAC 218.301, Use Of Organic Material.

7.5.5 Control Requirements and Work Practices

a. The affected boilers shall only be fired with natural gas.

7.5.6 Production and Emission Limitations

In addition to Condition 5.3 and the source wide emission limitations in Condition 5.6, the affected boilers are subject to the following:

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

Emission Unit	Firing Rate (mmBtu/hr)	Annual Emissions (Tons/Year)				
		CO[1]	NO_x[1]	PM	SO_2	VOM[1]
Three Boilers	97.2	37.45	44.58	3.388	0.267	2.45

[1] Natural gas firing

These limits are based on compliance with 35 IAC 212.206 and 35 IAC 214.122(b), standard emission factors, the type of fuel, the maximum firing rate, and the maximum hours of operation (8,736 hr/yr).

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

c. The above limitations contain revisions to previously issued Permit 88080014. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the

most current and accurate information for the source. Specifically, CO, NOx, and PM emissions have been revised based on revisions to the standard emission factors [T1R].

7.5.7 Testing Requirements

None

7.5.8 Monitoring Requirements

None

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected boilers to demonstrate compliance with Conditions 5.6, 7.5.3, and 7.5.6 pursuant to Section 39.5(7)(b) of the Act:

a. Natural gas fuel usage for the affected boilers, Mft^3/mo and Mft^3/yr;

b. Monthly and annual aggregate CO, NO_x, PM, SO_2, and VOM emissions from the affected boilers shall be maintained, based on fuel consumption and the applicable emission factors, with supporting calculations.

7.5.10 Reporting Requirements

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

a. Emissions of CO, NO_x, PM, SO_2, and/or VOM in excess of the limit specified in Condition 7.5.6 within 30 days;

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

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:

a. Compliance with Conditions 7.5.3(c) and (d) is assumed by the work-practices inherent in operation of natural gas-fired boilers.

b. Compliance with the emission limits of Conditions 5.6 and 7.5.6 shall be based on the emission factors listed below:

i. To determine compliance with Conditions 5.6 and 7.5.6, emissions from the affected boilers burning natural gas shall be calculated based on the following emission factors:

Pollutant	Natural Gas Emission Factor (lb/Mft^3)
CO	84
NO_x	100
PM	7.6
SO_2	0.6
VOM	5.5

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

Boiler Emissions (lb) = (Natural Gas Consumed, Mft^3) x (The Appropriate Emission Factor, lb/Mft^3)

7.6 Unit: NGDDF - NGD Crankshaft Draw Furnace

7.6.1 Description

The next generation diesel (NGD) engine crankshaft draw furnace is used for heat treating metal. Emissions from this unit will be due to byproducts of natural gas combustion.

7.6.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
NGDDF	Lanley Draw Furnace (NGD Crankshaft Draw Furnace)	April, 1992	None

7.6.3 Applicable Provisions and Regulations

a. The NGD Crankshaft Draw Furnace is an "affected draw furnace" for the purpose of these unit-specific conditions.

b. The affected draw furnace is subject to the emission limits identified in Condition 5.6.

c. The affected draw furnace is 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)].

ii. Because the expected process weight rate for the affected draw furnace is 5,000 pounds per hour, the allowable PM emission rate for the affected draw furnace set by 35 IAC 212.321 is 4.14 pounds per hour.

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

e. 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 35 IAC 218

Subpart G shall apply only to photochemically reactive material [35 IAC 218.301].

7.6.4 Non-Applicability of Regulations of Concern

a. The affected draw furnace 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 affected draw furnace is not by definition a fuel combustion emission unit.

b. The affected draw furnace is not subject to 35 IAC 217.121, emissions of nitrogen oxides from new fuel combustion emission sources, because the actual heat input is less than 73.2 MW (250 mmBtu/hr) and the affected draw furnace is not by definition a fuel combustion emission unit.

7.6.5 Control Requirements and Work Practices

The affected draw furnace shall only be operated with natural gas as the fuel.

7.6.6 Production and Emission Limitations

In addition to Condition 53 and the source wide emission limitations in Condition 5.6, the affected draw furnace is subject to the following:

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

Item of	Fuel Usage		NO_x Emissions		CO Emissions	
Equipment	(Mft^3/mo)	(Mft^3/yr)	(ton/mo)	(ton/yr)	(ton/mo)	(ton/yr)
Draw Furnace	3.2	19.4	0.16	0.97	0.13	0.80

These limits are based on standard emission factors, the type of fuel, and the maximum fuel usage.

b. The above limitations contain revisions to previously issued Permit 91100096. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism

for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the emission limit for CO has been increased based on a revised AP-42 emission factor and the production limitations have been switched from the maximum firing rate and maximum hours of operation of the unit to the maximum monthly and annual fuel usage rates [T1R].

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

7.6.7 Testing Requirements

None

7.6.8 Monitoring Requirements

None

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected draw furnace to demonstrate compliance with Conditions 5.6, 7.6.3, and 7.6.6 pursuant to Section 39.5(7)(b) of the Act:

a. Records of the fuel usage for the affected draw furnace, Mft^3/mo and Mft^3/yr; and

b. Records of monthly and annual aggregate CO, NO_x, PM, SO_2, and VOM emissions from the affected draw furnace shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.6.10 Reporting Requirements

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

Emissions of NO_x and/or CO in excess of the limits in Condition 7.6.6 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.6.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.6.9 and the emission factors and formulas listed below:

a. Compliance with Condition 7.6.3 is assumed by the work-practices inherent in operation of a natural gas-fired draw furnace.

b. To determine compliance with Conditions 5.6 and 7.6.6 fuel combustion emissions from the affected draw furnace shall be calculated based on the following emission factors:

Pollutant	Emission Factor (lb/Mft^3)
CO	84
NO_x	100
PM	7.6
SO_2	0.6
VOM	5.5

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

Draw Furnace Emissions (lb) = (Natural Gas Consumed, Mft^3) x (The Appropriate Emission Factor, lb/Mft^3)

7.7 Units: SH - Space Heaters Constructed Prior to 1999

7.7.1 Description

Numerous natural gas-fired space heaters are located throughout the facility. The heaters are used to retain a comfortable working temperature in the area. Emissions from these units will be the byproducts of natural gas fuel combustion.

7.7.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Rated Heat Input
L-3	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
L-6	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
L-9	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
L-13	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
BB-3	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
BB-8	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
BB-12	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
N-18	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
G-12	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
G-8	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
G-4	Rapid Model 3073 Natural Gas Fired Space Heater	November, 1987	8.25 mmBtu/hr
BB-7	Rapid Model SR66 Natural Gas Fired Space Heater	November, 1987	6.25 mmBtu/hr
B-23	Rapid Model 3060 Natural Gas Fired Space Heater	November, 1987	4.25 mmBtu/hr
10-E	Rapid Model 3049 Natural Gas Fired Space Heater	November, 1987	3.25 mmBtu/hr
10-W	Rapid Model 3049 Natural Gas Fired Space Heater		3.25 mmBtu/hr
A-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
C-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
D-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr

Emission Unit	Description	Date Constructed	Rated Heat Input
E-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
F-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
G-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
H-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
I-20	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
I-16	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
G-24	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
K-15	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
K-18	Buffalo Model C-25-210-GFU Natural Gas Fired Space Heater	May, 1971	2.5 mmBtu/hr
AA-21-3	Hartzell Model G-2512 Natural Gas Fired Space Heater	November, 1970	2.5 mmBtu/hr
AA-21-4	Hartzell Model G-2512 Natural Gas Fired Space Heater	November, 1970	2.5 mmBtu/hr
D-2	Hartzell Model G-259 Natural Gas Fired Space Heater	November, 1970	2.5 mmBtu/hr
H-2	Hartzell Model G-259 Natural Gas Fired Space Heater	November, 1970	2.5 mmBtu/hr
L-9	Devilbliss Model ARG-50 Natural Gas Fired Space Heater	January, 1970	5.2 mmBtu/hr
AA-17	Devilbliss Model ARG-50 Natural Gas Fired Space Heater	January, 1970	5.2 mmBtu/hr
L-13-0	Devilbliss Model ARG-50 Natural Gas Fired Space Heater	January, 1970	5.2 mmBtu/hr
L-13-3	Devilbliss Model ARG-50 Natural Gas Fired Space Heater	January, 1970	5.2 mmBtu/hr

7.7.3 Applicable Provisions and Regulations

a. The 35 natural gas fired space heaters constructed prior to 1999 are "affected space heaters" for the purpose of these unit-specific conditions.

b. Each affected space heater is subject to the emission limits identified in Condition 5.6.

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

d. 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, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall only apply to photochemically reactive material [35 IAC 218.301].

7.7.4 Non-Applicability of Regulations of Concern

a. The affected space heaters are not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because the affected space heaters are not by definition fuel combustion emission units.

b. The affected space heaters are not subject to 35 IAC 217.121, emissions of nitrogen oxides from new fuel combustion emission sources, or 35 IAC 217.141, emissions of nitrogen oxides from existing fuel combustion emission sources in major metropolitan areas, because the actual heat input of each unit is less than 73.2 MW (250 mmBtu/hr) and the affected space heaters are not by definition fuel combustion emission units.

c. This permit is issued based on the affected space heaters not being subject to 35 IAC 212.321 or 212.322 because due to the unique nature of this process, such rules cannot reasonably be applied.

7.7.5 Control Requirements and Work Practices

The affected space heaters shall only be operated with natural gas as the fuel.

7.7.6 Production and Emission Limitations

In addition to Condition 5.3 and the source wide emission limitations in Condition 5.6, the affected space heaters are subject to the following:

a. Emissions and operation of the space heaters shall not exceed the following limits:

Emission Unit	Fuel Usage (Mft^3/mo)	Fuel Usage (Mft^3/yr)	NO_x Emissions (ton/mo)	NO_x Emissions (ton/yr)
35 Space Heaters	111.85	755	5.60	37.75

These limits are based on standard emission factors, the type of fuel and the maximum fuel usage.

b. The above limitations are being established in this permit pursuant to Title I of the Clean Air Act, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The source has requested that the Illinois EPA establish emissions limitations and other appropriate terms and conditions in this permit that limit the emissions from the affected space heaters below the levels that would trigger the applicability of these rules, consistent with the information provided in the CAAPP application [T1N].

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

7.7.7 Testing Requirements

None

7.7.8 Monitoring Requirements

None

7.7.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected space heaters to demonstrate compliance with Conditions 5.6, 7.7.3, and 7.7.6 pursuant to Section 39.5(7)(b) of the Act:

a. Records of the fuel usage for the affected space heaters, Mft^3/mo and Mft^3/yr; and

b. Records of monthly and annual aggregate NO_x, PM, SO_2, and VOM emissions from the affected space heaters shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.7.10 Reporting Requirements

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

Emissions of NO_x in excess of the limits in Condition 7.7.6 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.7.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.7.9 and the emission factors and formulas listed below:

a. Compliance with Condition 7.7.3 is assumed by the work-practices inherent in operation of natural gas-fired space heaters.

b. To determine compliance with Conditions 5.6 and 7.7.6 fuel combustion emissions from the affected space heaters shall be calculated based on the following emission factors:

Pollutant	Emission Factor (lb/Mft^3)
NO_x	100
PM	7.6
SO_2	0.6
VOM	5.5

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

Space Heater Emissions (lb) = (Natural Gas Consumed, Mft^3) x (The Appropriate Emission Factor, lb/Mft^3)

7.8 Units: ETC - 79 Engine Test Cells

7.8.1 Description

The engine test cells are operated to verify the operation of each of the assembled engines. Emissions from these cells are the byproducts of fuel combustion. The engine test cells were installed and operational since 1946.

7.8.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
ETC	79 International Transportation Corp. Engine Test Cells	Prior to 1970	None

7.8.3 Applicable Provisions and Regulations

a. The 79 engine test cells are "affected engine test cells" for the purpose of these unit-specific conditions.

b. Each affected engine test cell is subject to the emission limits identified in Condition 5.6.

c. Pursuant to 35 IAC 214.122(b)(2) and 214.304, no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from the burning of fuel at process emission units located in the Chicago major metropolitan area 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 input when distillate fuel oil is burned (0.3 lb/mmBtu).

d. 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, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall only apply to photochemically reactive material [35 IAC 218.301].

7.8.4 Non-Applicability of Regulations of Concern

a. The affected engine test cells are not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because the affected engine test cells are not by definition fuel combustion emission units.

b. The affected engine test cells 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 each unit is less than 73.2 MW (250 mmBtu/hr) and the affected engine test cells are not by definition fuel combustion emission units.

c. This permit is issued based on the affected engine test cells not being subject to 35 IAC 212.322 because due to the unique nature of this process, such rules cannot reasonably be applied.

7.8.5 Control Requirements and Work Practices

a. The affected engine test cells shall only be operated with distillate fuel oil.

b. Distillate fuel oil (Grades No. 1 and 2) with a sulfur content greater than the larger of the following two values shall not be used in an affected engine test cells:

i. 0.28 weight percent, or

ii. The wt percent given by the formula: Maximum wt percent sulfur = (0.000015) x (Gross heating value of oil, Btu/lb).

7.8.6 Production and Emission Limitations

There are no specific emission limitations for these units, however, there are source wide emission limitations in Condition 5.6 that include these units.

7.8.7 Testing Requirements

None

7.8.8 Monitoring Requirements

None

7.8.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected engine test cells to demonstrate compliance with Conditions 5.6 and 7.8.3 pursuant to Section 39.5(7)(b) of the Act:

a. Distillate fuel oil usage for the Engineering Test Cells, gal/mo and gal/yr;

b. Distillate fuel oil usage for the Production Test Cells, gal/mo and gal/yr;

c. The sulfur content of the distillate fuel oil used in the affected engine test cells (% by Wt), this shall be

recorded for any one shipment of oil delivered to the source each month; and

d. Monthly and annual aggregate NO_x, PM, SO_2, and VOM emissions from the affected engine test cells shall be maintained, based on the fuel usage of the affected engine test cells and the applicable emission factors, with supporting calculations.

7.8.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected engine test cells 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.

7.8.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.8.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.8.9 and the emission factors and formulas listed below:

a. Compliance with Condition 7.8.3(d) is assumed by the work-practices inherent in operation of distillate oil-fired engine test cells.

b. Compliance with Condition 7.8.3(c) is assumed to be demonstrated by operation of the affected engine test cells with distillate fuel oil with a sulfur content meeting the specification of Condition 7.8.5(b).

c. To determine compliance with Condition 5.6, emissions from the affected engine test cells shall be calculated based on the following emission factors:

Pollutant	Engineering Test Cell Emission Factor (lb/gal)	Production Test Cell Emission Factor (lb/gal)
NO_x	0.188	0.192
PM	0.011	0.006
SO_2	7.1 S	7.1 S
VOM	0.023	0.012

These are the emission factors for uncontrolled diesel reciprocating engine testing at this source based on stack testing. S indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Engine Test Cell Emissions (lb) = (Distillate Fuel Oil Consumed, gal)x (The Appropriate Emission Factor, lb/gal)

7.9 Unit: COGEN - Cogeneration System
Control: C3 - 3-Way Catalytic Converters

7.9.1 Description

The cogeneration system is used to supply electricity to the plant during the peak operating hours and for emergency purposes when the facility experiences a loss of electrical service from the public utility company. The system consists of 12 Caterpillar natural gas reciprocating engines producing a combined total of 9.4 MW. Each engine has a 4160-volt generator to produce nominally 770 kW of self-generated power. Each engine also has an exhaust heat recovery silencer and produces steam for heating and process as well as a three-way catalytic converter to reduce emissions. The catalytic converter has temperature sensors to monitor operation. In addition, an air/fuel controller is mounted to each engine set to maintain a rich fuel mixture.

7.9.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
COGEN	12 Caterpillar Model G3516SITA Natural Gas Spark Ignition Reciprocating Engines	July, 1992	3-Way Catalytic Converters (12)

7.9.3 Applicable Provisions and Regulations

a. Each engine is an "affected engine" for the purpose of these unit-specific conditions.

b. Each affected engine is subject to the emission limits identified in Condition 5.6.

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

d. 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, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall only apply to photochemically reactive material [35 IAC 218.301].

7.9.4 Non-Applicability of Regulations of Concern

a. The affected engines are not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because the affected engines are not by definition fuel combustion emission units.

b. The affected engines are not subject to 35 IAC 217.121, emissions of nitrogen oxides from new fuel combustion emission sources, because the actual heat input of each unit is less than 73.2 MW (250 mmBtu/hr) and the affected engines are not by definition fuel combustion emission units.

c. This permit is issued based on the affected engines not being subject to 35 IAC 212.321 because due to the unique nature of this process, such rules cannot reasonably be applied.

7.9.5 Control Requirements and Work Practices

a. The 3-way catalytic converters shall be operated to control emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic material (VOM).

i. The 3-way catalytic converters shall be operated to provide 92.5%, 83%, and 45% control efficiency for NO_x, CO, and VOM respectively.

ii. The Permittee shall follow good operating practices for the 3-way catalytic converters, including periodic inspection, routine maintenance and prompt repair of defects.

b. The affected engines shall only be operated with natural gas as the fuel.

7.9.6 Production and Emission Limitations

In addition to Condition 53 and the source wide emission limitations in Condition 5.6, the affected engines are subject to the following:

a. The operation of affected engines shall not exceed the following limits:

Emission Unit	Natural Gas Usage (therms/mo)	Natural Gas Usage (therms/yr)
12 Engines	537,339	3,224,034

b. Emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic material (VOM) from the engines shall not exceed the following limits:

Emission Unit	EMISSIONS NO_x (T/Mo)	NO_x (T/Yr)	CO (T/Mo)	CO (T/Yr)	VOM (T/Mo)	VOM (T/Yr)
12 Engines	6.27	37.56	14.55	87.60	0.57	4.20

c. These limits are based on emission factors supplied by the vendor, the type of fuel, and the maximum electric outputs of the affected engines.

d. 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).

e. The above limitations contain revisions to previously issued Permit 92080029. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the limits for the operating hours and natural gas fuel usage have been replaced with monthly and annual limits of the natural gas usage for all 12 of the affected engines [T1R].

7.9.7 Testing Requirements

None

7.9.8 Monitoring Requirements

Monitoring of the fuel usage of the affected engines shall be performed as follows [Section 39.5(7)(b) of the Act]:

a. The Permittee shall install and operate a continuous monitoring system to monitor and record the fuel consumption for the affected engines.

7.9.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9,the Permittee shall maintain records of the following items for the affected engines to demonstrate compliance with Conditions 5.6, 7.9.3, and 7.9.6 pursuant to Section 39.5(7)(b) of the Act:

a. Records addressing use of good operating practices for the 3-way catalytic converters:

i. Records for periodic inspection of the 3-way catalytic converters 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.

b. Natural gas fuel consumption for each affected engine, therms/mo, and therms/yr;

c. Monthly and annual aggregate CO, NO_x, PM, SO_2, and VOM emissions from the affected engines shall be maintained, based on the electrical output of the affected engines and the applicable emission factors, with supporting calculations.

7.9.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected engines 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. Three day operation of an affected engine with a defect in a 3-way catalytic converter that may result in emissions in excess of limits in Condition 7.9.3(c) and/or 7.9.6(b) within 30 days of such an occurrence.

b. Emissions of NO_x, CO, and/or VOM in excess of the limits in Condition 7.9.6(b) based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

c. Operation of the affected engines in excess of the limits in Condition 7.9.6(a) within 30 days of such an occurrence.

7.9.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.9.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.9.9 and the emission factors and formulas listed below:

a. Compliance with Conditions 7.9.3(b) and (c) is assumed by the work-practices inherent in operation of natural gas-fired engines.

b. Compliance with Condition 7.9.3(c) is assumed to be demonstrated by operation of the 3-way catalytic converters as specified in Condition 7.9.5(a).

c. Compliance with the emission limits of Conditions 5.6 and 7.9.6(b) shall be based on the emission factors listed below:

i. To determine compliance with Conditions 5.6 and 7.9.6(b), emissions of CO, NO_x, and VOM from the affected engines shall be calculated based on the following emission factors:

Pollutant	Emission Factor (lb/Mft^3)
CO	541
NO_x	233
VOM	21

These are the uncontrolled emission factors for CO, NO_x, and VOM for the Caterpillar Model 3516 SI natural gas reciprocating engine and were supplied by the vendor. VOM emission factor is based on the nonmethane emission factor.

Engine Emissions (lb) = (Natural Gas Consumed, therms) x (100 ft^3/Therm) x (1 Mft^3/1,000,000 ft^3) x (The Appropriate Emission Factor, lb/Mft^3) x [1 - (Catalytic Converter Efficiency* (%)/100)]

* As specified by Condition 7.9.5(a)(i).

ii. To determine compliance with Condition 5.6 emissions of PM and SO_2 from the affected engines shall be calculated based on the following emission factors:

Pollutant	Emission Factor (lb/Mft^3)
PM	10.0
SO_2	0.6

These are the emission factors for uncontrolled natural gas reciprocating cogeneration engines (SCC #20200204), FIRE Version 5.0 Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, August, 1995. PM emission factor is based on the PM_{10} factor.

Engine Emissions (lb) = (Natural Gas Consumed, Mft^3) x (100 ft^3/Therm) x (1 Mft^3/1,000,000 ft^3) x (The Appropriate Emission Factor, lb/Mft^3)

7.10 Units: EETC - 9 Engineering Engine Test Cells

7.10.1 Description

The engineering engine test cells are used to support new light duty engine development and testing. These test cells include chassis emission cells, mileage accumulation stands, powertrain simulation test cells and performance dyno test cells. Emissions from these cells are the byproducts of fuel combustion.

7.10.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
EETC	9 International Transportation Corp. Engineering Engine Test Cells	1998	None

7.10.3 Applicable Provisions and Regulations

a. The 9 engineering engine test cells are "affected engine test cells" for the purpose of these unit-specific conditions.

b. Each affected engine test cell is subject to the emission limits identified in Condition 5.6.

c. Pursuant to 35 IAC 214.122(b)(2) and 214.304, no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from the burning of fuel at process emission units located in the Chicago major metropolitan area 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 input when distillate fuel oil is burned (0.3 lb/mmBtu).

d. 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, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall only apply to photochemically reactive material [35 IAC 218.301].

7.10.4 Non-Applicability of Regulations of Concern

a. The affected engine test cells are not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because the affected engine test cells are not by definition fuel combustion emission units.

b. The affected engine test cells 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 each unit is less than 73.2 MW (250 mmBtu/hr) and the affected engine test cells are not by definition fuel combustion emission units.

c. This permit is issued based on the affected engine test cells not being subject to 35 IAC 212.321 because due to the unique nature of this process, such rules cannot reasonably be applied.

7.10.5 Control Requirements and Work Practices

a. The affected engine test cells shall only be operated with distillate fuel oil.

b. Distillate fuel oil (Grades No. 1 and 2) with a sulfur content greater than the larger of the following two values shall not be used in an affected engine test cells:

i. 0.28 weight percent, or

ii. The wt percent given by the formula: Maximum wt percent sulfur = (0.000015) x (Gross heating value of oil, Btu/lb).

7.10.6 Production and Emission Limitations

In addition to Condition 5.3 and the source wide emission limitations in Condition 5.6, the affected engine test cells are subject to the following:

a. The total fuel usage for all fifteen diesel engine test cells shall not exceed the following limits:

(gallons/month)	(gallons/year)
53,625	321,750

b. The total emissions from all fifteen diesel engine test cells shall not exceed the following limits:

CO		NO_x		PM	
(ton/mo)	(ton/yr)	(ton/mo)	(ton/yr)	(ton/mo)	(ton/yr)
43.76	16.41	82.37	30.89	4.72	1.77

SO_2		VOM	
(ton/mo)	(ton/yr)	(ton/mo)	(ton/yr)
5.96	2.23	9.87	3.70

c. These limits are based on the maximum fuel usage for the engine test cells and representations of the maximum actual emissions resulting from the maximum fuel usage. The emission factors for NO_x (0.188 lb/gal), PM (0.011 lb/gal), SO_2 (0.0139 lb/gal), and VOM (0.023 lb/gal) are based on stack testing and a standard emission factor for CO (102 lb/1000 gal).

d. 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).

e. The above limitations were established in Permit 98070033, pursuant to 35 IAC Part 203 and 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 and the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

f. The VOM emission units with contemporaneous VOM emissions are described in Table 1 of Attachment 3. The emission units or activities used to decrease emissions are described in Table 2 of Attachment 3. The net change in VOM emissions is described in Table 3 of Attachment 3.

7.10.7 Testing Requirements

None

7.10.8 Monitoring Requirements

None

7.10.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected engine test cells to demonstrate compliance with Conditions 5.6 and 7.10.3 pursuant to Section 39.5(7)(b) of the Act:

a. Distillate fuel oil usage for the affected engine test cells, gal/mo and gal/yr (running total);

b. The sulfur content of the distillate fuel oil used in the affected engine test cells (% by Wt), this shall be recorded for any one shipment of oil delivered to the source each month; and

c. Monthly and annual aggregate CO, NO_x, PM, SO_2, and VOM emissions from the affected engine test cells shall be maintained, based on the fuel usage of the affected engine test cells and the applicable emission factors, with supporting calculations.

7.10.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected engine test cells 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 7.10.5(b) with the length of time this fuel was used and the effect on emissions of SO_2 within 30 days of this violation being detected.

b. Emissions from the fifteen diesel engine test cells in excess of the limits in Condition 7.10.6(b) within 30 days of a record showing such an occurrence.

7.10.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.10.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.10.9 and the emission factors and formulas listed below:

a. Compliance with Condition 7.10.3(d) is assumed by the work-practices inherent in operation of distillate oil-fired engine test cells.

b. Compliance with Condition 7.10.3(c) is assumed to be demonstrated by operation of the affected engine test cells with distillate fuel oil with a sulfur content meeting the specification of Condition 7.10.5(b).

c. To determine compliance with Condition 5.6, emissions from the affected engine test cells shall be calculated based on the following emission factors:

i. NO_x, PM, SO_2, and VOM Emissions:

Pollutant	Emission Factor lb/gal
NO_x	0.188

PM	0.011
SO_2	7.1 S
VOM	0.023

These are the emission factors for uncontrolled diesel reciprocating engine testing at this source based on stack testing. S indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Engine Test Cell Emissions (lb) = (Distillate Fuel Oil Consumed, gal) x (The Appropriate Emission Factor, lb/gal)

ii. CO Emissions:

Pollutant	Emission Factor lb/1000 gal
CO	0.102

This is the emission factor for emissions of CO from Diesel/Kerosene Reciprocating Engine Testing (SCC 20400402), FIRE Version 5.0 Source Classification Codes and Emission Factor Listing for Criteria Air Pollutant (August, 1995).

Engine Test Cell Emissions (lb) = (Distillate Fuel Oil Consumed, gal) x (The Appropriate Emission Factor, lb/1000 gal)

7.11 Unit: TG - Temporary Generator

7.11.1 Description

This internal combustion engine will be used for electric generation. The engine will only be fired with #2 fuel oil. The installation of this engine is planned to supplement the source's existing electric generation system as well as any peak period electrical demands. The engine does not utilize any control equipment.

7.11.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
TG	13,488,800 Btu/Hr Caterpillar Model #3516 #2 Fuel Oil Fired Internal Combustion Engine (Temporary Generator)	September, 1999	None

7.11.3 Applicable Provisions and Regulations

a. The "affected engine" for the purpose of these unit-specific conditions, are the emission units described in Conditions 7.11.1 and 7.11.2.

b. The affected engine is subject to the emission limits identified in Condition 5.6.

c. 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].

d. 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, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall only apply to photochemically reactive material [35 IAC 218.301].

7.11.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected engine not being subject to the requirements of 35 IAC 212.322, emissions of particulate matter from process emission units, because due to the unique nature of this process, such rules cannot reasonably be applied.

b. The affected engine is not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because the affected engine is not by definition a fuel combustion emission unit.

7.11.5 Control Requirements and Work Practices

#2 fuel oil shall be the only fuel fired in the affected engine.

7.11.6 Production and Emission Limitations

In addition to Condition 5.3 and the source wide emission limitations in Condition 5.6, the affected engine is subject to the following:

a. Emissions from the affected engine shall not exceed the following limits:

Pollutant	Emissions (tons/Mo)	Emissions (tons/Yr)
PM	0.1	0.3
CO	1.2	4.6
NO_x	8.0	32.0
VOM	0.2	0.6
SO_2	0.1	0.3

These limits are based on the usage limits specified in Condition 7.11.5(b) and emission factors and formulas specified in Condition 7.11.12(c).

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

c. The above limitations were established in Permit 99060064, 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].

d. #2 Fuel oil usage by the affected engine shall not exceed 23,925 gallons/month and 95,700 gallons/year.

7.11.7 Testing Requirements

None

7.11.8 Monitoring Requirements

None

7.11.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for each affected engine to demonstrate compliance with Conditions 5.6, 7.11.3, 7.11.5, and 7.11.6, pursuant to Section 39.5(7)(b) of the Act:

a. #2 fuel oil usage for the affected engine (gallons month and gallons/year).

b. Monthly and annual aggregate NO_x, PM, SO_2, and VOM emissions from the affected engine shall be maintained, based on fuel consumption and the applicable emission factors, with supporting calculations.

7.11.10 Reporting Requirements

The Permittee shall notify the Illinois EPA, Compliance Section, within 3 days, of noncompliance of an affected engine 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. #2 fuel oil usage from the affected engine in excess of the limits specified in Condition 7.11.5(b).

b. Emissions in excess of the limits specified in Condition 7.11.6(a).

7.11.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.11.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.11.9 and the emission factors and formulas listed below:

a. Compliance with Conditions 7.1.3(b), (c), and (d) is considered to be assured by the normal work practices and maintenance activities inherent in operation of the affected engine.

b. Compliance with the emission limits in Conditions 5.6 and 7.11.6(a) shall be based on the recordkeeping requirements in Condition 7.11.9 and the emission factors and formulas listed below:

i. Emission factors for the affected engine:

Pollutant	Emission Factor (lb/gallon)

PM	0.0053
CO	0.0957
NO_x	0.6680
VOM	0.0111
SO_2	0.0062

These are emission factors determined for the affected engine using manufacturer's data.

ii. Emission formula for the affected engine:

Engine Emissions (ton) = (#2 Fuel Oil Consumed, Gallons) x (The Appropriate Emission Factor) . (2,000 lb/ton)

7.12 Unit: CPC - Cold Part Cleaning Operation

7.12.1 Description

Miscellaneous production, engine engineering and maintenance parts cleaning.

7.12.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Date Constructed	Emission Control Equipment
Cold Parts Cleaning Operation	Cleaning of Parts	Pre-1980	None

7.12.3 Applicable Provisions and Regulations

a. The "affected cold parts cleaning operation" for the purpose of these unit-specific conditions, is the emission unit described in Conditions 7.12.1 and 7.12.2.

b. The affected cold parts cleaning operation is subject to the emission limits identified in Condition 5.6.

c. The affected cold parts cleaning operation is subject to the following:

i. Pursuant to 35 IAC 218.182(a), no person shall operate a cold cleaning degreaser unless:

A. Waste solvent is stored in covered containers only and not disposed of in such manner that more than 20% of the waste solvent (by weight) is allowed to evaporate into the atmosphere [35 IAC 218.182(a)(1)];

B. The cover of the degreaser is closed when parts are not being handled [35 IAC 218.182(a)(2)]; and

C. Parts are drained until dripping ceases [35 IAC 218.182(a)(3)].

ii. Pursuant to 35 IAC 218.182(b), no person shall operate a cold cleaning degreaser unless:

A. The degreaser is equipped with a cover which is closed whenever parts are not being handled in the cleaner. Pursuant to 35 IAC 218.182(b)(1), the cover shall be designed to be easily operated with one hand or with the mechanical assistance of springs, counter-weights or a powered system if:

1. The solvent vapor pressure is greater than 2 kPa (15 mmHg or 0.3 psi) measured at 38°C (100°F) [35 IAC 218.182(b)(1)(A)];

2. The solvent is agitated [35 IAC 218.182(b)(1)(B)]; or

3. The solvent is heated above ambient room temperature [35 IAC 218.182(b)(1)(C)].

B. The degreaser is equipped with a device for draining cleaned parts. Pursuant to 35 IAC 218.182(b)(2), the drainage device shall be constructed so that parts are enclosed under the cover while draining unless:

1. The solvent vapor pressure is less than 4.3 kPa (32 mmHg or 0.6 psi) measured at 38°C (100°F) [35 IAC 218.182(b)(2)(A)]; or

2. An internal drainage device cannot be fitted into the cleaning system, in which case the drainage device may be external [35 IAC 218.182(b)(2)(B)].

C. Pursuant to 35 IAC 218.182(b)(2), the degreaser is equipped with one of the following control devices if the vapor pressure of the solvent is greater than 4.3 kPa (32 mmHg or 0.6 psi) measured at 38°C (100°F) or if the solvent is heated above 50°C (120°F) or its boiling point:

1. A freeboard height of 7/10 of the inside width of the tank or 91 cm (36 in), whichever is less [35 IAC 218.182(b)(3)(A)]; or

2. Any other equipment or system of equivalent emission control as approved by the Illinois EPA and further processed consistent with 35 IAC 218.108. Such a system may include a water cover, refrigerated chiller or carbon adsorber [35 IAC 218.182(b)(3)(B)].

D. A permanent conspicuous label summarizing the operating procedure is affixed to the degreaser [35 IAC 218.182(b)(4)]; and

E. If a solvent spray is used, the degreaser is equipped with a solid fluid stream spray,

rather than a fine, atomized or shower spray [35 IAC 218.182(b)(5)].

7.12.4 Non-Applicability of Regulations of Concern

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

7.12.5 Control Requirements and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9 and also requirements for general source-wide control requirements set forth in Condition 5.3, the affected cold cleaning operations are subject to the following:

a. The equipment requirements of 35 IAC 218.182(b)(1) through (5).

b. The material requirements of 35 IAC 218.182 (1) and (2).

7.12.6 Production and Emission Limitations

In addition to the limits of Condition 5.6, emissions from the affected cold parts cleaning operations shall not shall not exceed the following limits:

Cleaning Solvent VOM Usage		VOM Emissions	
(ton/mo)	(ton/yr)	(ton/mo)	(ton/yr)
1.76	10.54	1.76	10.54

These limits are based on representations of the maximum actual emissions resulting from the maximum cleaning solvent usage at the maximum VOM content of the cleaning solvents (100% by weight).

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).

The limits on VOM are limitations established in Permit 98070033 pursuant to 35 IAC Part 203. These limits ensure that the construction/modification addressed in the aforementioned Permit does not constitute a new major source or major modification pursuant to 35 IAC Part 203. See Conditions 7.2.6 and 7.10.6 [T1].

The VOM emission units with contemporaneous VOM emissions are described in Table 1 of Attachment 3. The emission units or activities used to decrease emissions are described in Table 2

of Attachment 3. The net change in VOM emissions is described in Table 3 of Attachment 3.

7.12.7 Testing Requirements

a. Upon reasonable request by the Illinois EPA, pursuant to Section 39.5(7)(b) of the Act, the vapor pressure of the cleaning solvent, the exhaust ventilation rates, and the performance of any control devices shall be determined according to the methods specified in Condition 5.7.

b. The following test methods shall be used to demonstrate compliance with 35 IAC 218 Subpart E:

   i. Vapor pressures shall be determined by using the procedure specified in 35 IAC 218.110; [35 IAC 218.186(a)]

   ii. Exhaust ventilation rates shall be determined by using the procedures specified in 35 IAC 218.105(f)(3) [35 IAC 218.186(b)]; and

   iii. The performance of control devices shall be determined by using the procedures specified in 35 IAC 218.105(f). [35 IAC 218.186(c)]

7.12.8 Monitoring Requirements

Monitoring requirements are not set for the affected cold parts cleaning operations.

7.12.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected cold parts cleaning operations as required by 35 IAC 218.182(d)(1)(A) through (F) to demonstrate compliance with Condition 7.1.3(c), pursuant to Section 39.5(7)(b) of the Act:

Records for Cold Parts Cleaning

a. The amount of solvent added to the cold parts cleaning operation (lb/mo and ton/yr);

b. The VOM content of the solvent to the cold parts cleaning operation; % by weight;

c. The amount of solvent recovered from the cold parts cleaning operation for reclamation and recycling (lb/mo and ton/yr);

d. The VOM content of the solvent recovered from the cold parts cleaning operation, % by weight;

e. The aggregate monthly and annual VOM emissions from the cold parts cleaning operation based on the solvent usage and the VOM content of the recovered solvent, with supporting calculations; and

f. Records of the testing of the cold cleaning degreasers pursuant to Condition 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.

7.12.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected cold parts cleaning operations with the permit requirements within 30 days, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

7.12.11 Operational Flexibility/Anticipated Operating Scenarios

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

7.12.12 Compliance Procedures

Compliance of the affected cold parts cleaning operations with conditions 7.12.6 and 5.6 shall be calculated using the following formulas and emission factors:

Emissions of VOM from the Cold Parts Cleaning Operation

a. Cold parts cleaning solvent VOM usage:

Cleaning Solvent VOM Usage (lb) = [(Weight of Solvent Added, lb) x (VOM Content of Solvent, % by wt.)] - [(Weight of Solvent Recovered, lb) x (VOM Content of Recovered Solvent, % by wt.)]

b. VOM emissions from cold parts cleaning solvent usage:

Cleaning Solvent VOM Emissions (lb) = [(Weight of Solvent Added, lb) x (VOM Content of Solvent, % by wt.)] - [(Weight of Solvent Recovered, lb) x (VOM Content of Recovered Solvent, % by wt.)]

7.13 Unit: 4 Engine Test Cells

7.13.1 Description

The 4 new engine test cells are for development of engines to meet EPA mobile emission standards.

7.13.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
4 Engine Test Cells	Engine Development Test Cells: 47, 48, 49, and 50	None

7.13.3 Applicability Provisions and Applicable Regulations

a. The engine test cells are affected engine test cells for the purpose of these unit-specific conditions.

b. The affected engine test cells are subject to 35 IAC 214.301, which provides that no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 PPM, [35 IAC 214.301].

c. The affected engine test cells are subject to 35 IAC 212.123, which provides that 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 subject to this subpart except; emissions of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located with in a 305 m (1,000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123]

d. The affected engine test cells are subject to 35 IAC 218.301, which provides that no person shall cause or allow the discharge of more than 8 lb/hr of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302, 218.303 or 218.304 and the following exemption: If no odor nuisance exists the limitation shall only apply to photochemically reactive material.

e. The affected engine test cells are subject to 35 IAC 212.321(a), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process

emission unit, 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)].

i. The emissions of particulate matter into the atmosphere in any one hour period from the affected engine test cells shall not exceed the allowable emission rates specified in the following equation:

$$E = A(P)B$$

Where:

P = Process weight rate

E = Allowable emission rate

A. For process weight rates up to 408 MG/hr (450 T/hr):

	English
P	T/hr
E	lbs/hr
A	2.54
B	0.534

7.13.4 Non-Applicability of Regulations of Concern

a. The affected engine test cells 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. The affected engine test cells are not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because the affected engine test cells are not by definition fuel combustion emission units.

c. The affected engine test cells are not subject to 35 IAC 212.206 because the affected engine test cells are not by definition fuel combustion emission units.

d. The affected engine test cells are not subject to 35 IAC 217.141, emissions of nitrogen oxides from existing fuel combustion emission sources in major metropolitan areas, because the affected emission units are not by definition fuel combustion emission units.

e. The affected engine test cells are not subject to 35 IAC 214.122 or 214.304, because the affected engine test cells are not by definition fuel combustion emission units.

f. This permit is issued based on the affected engine test cells not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected engine tests cells do not use add-on control devices to achieve compliance with an emission limitation or standard.

7.13.5 Operational and Production Limits and Work Practices

a. The engine test cells shall only be operated with distillate fuel oil consistent with fuel specifications corresponding to 2007 on-highway emission limits for engines less than 750 horsepower, or with an alternative fuel with equal or lower emission rate per unit of fuel combusted (lb/gal and/or lb/mmBtu) for each pollutant identified in Condition 1.6.

i. Sulfur content of distillate fuel oil shall not exceed 0.05% by weight.

b. Total fuel usage for all four affected engine test cells shall not exceed the following limits:

Gallons/Month	Gallons/Year
45,523	455,230

7.13.6 Emission Limitations

a. Emissions from the affected engine test cells shall not exceed the following limits:

Emissions	(Tons/Month)	(Tons/Year)
CO	0.90	9.00
NO_x	2.12	21.20
PM	0.08	0.80
SO_2	0.09	0.90
VOM	0.18	1.80

i. Compliance with these limits will be based on recordkeeping for the total quantity of fuel burned in the test cells, as described in Condition 1.9, and the emission factors listed in Condition 1.12.

b. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the CAA from the affected engine test cells shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs.

c. 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).

The above limitations were established in Permit 04110032. The construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.13.7 Testing Requirements

a. Upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 IAC Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. 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 [35 IAC 212.110(c)].

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 1.6.

7.13.8 Monitoring Requirements

None

7.13.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for each affected engine test cell:

a. Pursuant to 35 IAC 212.110(e) and Section 39.5(7)(e) of the Act, the owner or operator of an emission unit subject 35 IAC Part 212 shall retain records of all tests which are performed. These records shall be retained for at least five (5) years after the date a test is performed and shall include the following:

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. Cumulative fuel oil usage for each test cell, in gal/mo and gal/yr;

c. Monthly and annual aggregate CO, NO_x, PM, SO_2, VOM, and HAP emissions from the affected engine test cells shall be maintained, based on the fuel usage of the affected engine test cells and the applicable emission factors, with supporting calculations; and

d. Sulfur content of the distillate fuel oil, % by wt.

7.13.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of an affected engine test cells 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. A person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods that will be used [35 IAC 212.110(d)].

b. The use of any fuel other than the fuels specified in Condition 1.5 with the length of time this fuel was used and the effect on emissions within 30 days of this occurrence being detected.

c. Emissions from the affected engine test cells in excess of the limits in Condition 1.6 within 30 days of a record showing such an occurrence.

7.13.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.13.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 1.9 and the emission factors and formulas listed below:

a. To determine compliance with Condition 1.6 emissions from the affected engine test cells shall be calculated based on the following emission factors:

Pollutant	Emission Factor (Lb/Gal)
CO	0.039
NO_x	0.093
PM and PM_{10}	0.0032
SO_2	0.0036
VOM	0.0079

These are the emission factors specified by the applicant for the engines to be tested.

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 September 21, 2005 (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]:

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

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

8.6.2 Test Notifications

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

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

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

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

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

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

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

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

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The

test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

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

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

c. The date any analyses were performed;

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

e. The test and analytical methodologies used;

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

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

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

8.6.4 Reporting Addresses

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

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

i. Illinois EPA - Air Compliance Unit

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

ii. Illinois EPA - Air Quality Planning Section

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

iii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
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)(l) and (o) of the Act].

Note: Pursuant to Sections 39.5(5)(h) and (n) of the Act, upon submittal of a timely and complete renewal application, the permitted source may continue to operate until final action is taken by the Illinois EPA on the renewal application, provided, however, that this protection shall cease if the applicant fails to submit any additional information necessary to evaluate or take final action on the renewal

application as requested by the Illinois EPA in writing. For a renewal application to be timely, it must be submitted no later than 9 months prior to the date of permit expiration.

9.15 General Authority for the Terms and Conditions of this Permit

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

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

10.0 ATTACHMENTS

Attachment 1 Example Certification by a Responsible Official

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

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

Attachment 2 Emissions of Particulate Matter from Process Emission Units

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

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

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

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

Where:

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

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

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

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

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

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

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

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):

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

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

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

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

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

Attachment 3 Compliance Assurance Monitoring (CAM) Plan

Table 3.1 PSEU Designation:	Co-Gen # 1-12
Significant Emission Unit Section:	7.9
Pollutant:	CO, NO_x, and VOM

Indicators:	#1: Exhaust Temp. & Pressure Drop	#2: Annual Monitoring
GENERAL CRITERIA		
THE MONITORING APPROACH USED TO MEASURE THE INDICATORS:	Exhaust gas temperature measured by thermocouple. Pressure drop across converter measure with manometer.	CO, NO_x, and VOM concentrations in exhaust gas measure with portable gas analyzer by outside contractor.
THE INDICATOR RANGE WHICH PROVIDES A REASONABLE ASSURANCE OF COMPLIANCE:	An exhaust temp. > 1100 deg. F will trigger notification and inspection. Temp. > 1350 deg. F will shut-down engine.	Converter inlet/outlet pollutant concentrations are used to calculate efficiency. Outlet levels are compared to permit limits.
QUALITY IMPROVEMENT PLAN (QIP) THRESHOLD LEVELS:	A pressure drop greater than 4 inches. H_2O will require maintenance cleaning of the catalyst. QIP – Not Applicable	Not Applicable
PERFORMANCE CRITERIA		
THE SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA:	Thermocouple located at inlet to converter. Differential manometer ends located at converter inlet and outlet.	Portable gas analyzer measures CO, NO_x, and VOM levels at converter inlet and outlet.
VERIFICATION PROCEDURES TO CONFIRM THE OPERATIONAL STATUS OF THE MONITORING:	Calibrate monitoring devices every two years to confirm operational status.	Analyzer is calibrated to manufacturer's specifications.
QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES THAT ENSURE THE VALIDITY OF THE DATA:	Outside contractor will calibrate all Co-Gen monitoring devices and submit calibration test report every two years.	Not Applicable.

THE MONITORING FREQUENCY:	Inlet temperature measured continuously during Co-generation operation. Pressure drop read twice a month.	Annual monitoring.
THE DATA COLLECTION PROCEDURES THAT WILL BE USED:	Temp data is displayed instantaneously and any excursion is recorded in Co-generation system logbook.	Data and test results will be recorded in the Emissions Evaluation Report.
THE DATA AVERAGING PERIOD FOR DETERMINING WHETHER AN EXCURSION OR EXCEEDANCE HAS OCCURRED:	No averaging; Temp data is continuously measured. Pressure drop readings are recorded on bi-monthly logsheet.	Not Applicable.

Attachment 4 Guidance

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

Guidance On Revising A CAAPP Permit:

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

Guidance On Renewing A CAAPP Permit:

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

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

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

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

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

SIS:psj

Attachment 4 Preliminary Baseline Determination - Revised

217/782-2113

NOTICE OF PRELIMINARY BASELINE DETERMINATION -- REVISED

April 28, 2003

Navistar International Transportation Corp.
Attn: Sanjay Patel
10400 West North Avenue
Melrose Park, Illinois 60160

Source I.D. No.: 031186ABK
Source Application No.: 95080106
Date ERMS Addendum Received: December 11, 1998

Dear Mr. Patel:

The Illinois Environmental Protection Agency ("Illinois EPA") has made a revised preliminary baseline emissions determination for the above referenced source. In this determination, the total baseline emissions for the source are 29.3124 tons/season (TPS). The source's seasonal allocation for 2003 would be 270 allotment trading units (ATUs).

The Illinois EPA=s preliminary determination is attached. The revised preliminary baseline determination will be included in the source's CAAPP permit upon issuance.

Should you have questions regarding the attached preliminary determination, please call Bob Smet at 217/782-2113.

Sincerely,

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

DES:RPS:jar

Enclosure

cc: Region 1
CASM

ATTACHMENT A

PRELIMINARY BASELINE EMISSIONS SUMMARY

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

Emission Unit	Proposed	Illinois EPA Determination	Notes
Boilers #1, #2, and #3	0.0460	0.0910	1
41 Natural Gas Fired Space Heaters	0.0180	0.0190	1
Engine Test Cells	8.1290	8.1320	2
Cogen System	1.3149	1.3149	5
Total:	9.5079	9.5569	

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

Emission Unit	Proposed	Illinois EPA Determination*	Notes
Paint Booth #1	7.7110	6.9650	3
Paint Booth #2	5.5100	5.2510	4
Crankshaft Draw Furnaces #1 and #2	0.0010	0.0010	1
NGD Draw Furnace	0.0070	0.0140	1
Dry-Off Oven	0.0021	0.0020	5
Two Stage Drying Oven	0.0160	0.0160	5
Cold Cleaning Degreasers	7.5065	7.5065	6
Total:	20.7536	19.7555	

* Due to over or under compliance

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

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

Notes:

1 Emissions revised based upon new USEPA emission factor.

2 Difference in rounding technique.

3 Credits for overcompliance did not account for water in the coatings.

4 New Unit Added - Emissions calculated based upon actual as opposed to the average values in the applications.

5 New Unit Added.

6 Added to baseline due to collectively significant emissions generated during 1994-95, pursuant to the netting permit 98070033.

TOTAL SOURCE ALLOTMENT = 9.5569 + 0.88 x 19.7555 = 26.9417

OR 270 ATU

Please note that claims of over-compliance, under-compliance and/or BAT may have been modified to reflect the requirements of the ERMS Program at 35 IAC 205. ATUs shall be provided for those units for which three years of data is available.

RWB:jar