

Project Summary

I. INTRODUCTION

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

Caterpillar, Inc. is located at 2200 Channahon Road in Joliet. The source primarily manufactures hydraulic components, including tanks, pumps, valves and cylinders. Each of these families of components have test stands within the manufacturing processes which are used to cycle and/or test finished products for their conformance to Caterpillar's specifications. The plant also manufactures miscellaneous components, including ground engaging tools, bearings and caps. In addition, large mining vehicles, including excavators, wheel loaders and motorgraders are assembled on site. The manufacturing processes associated with the components and vehicles are machining, grinding, heat treating, welding, chrome plating, and painting.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 01	MJ6503: Haden-Schweitzer 82' Hydrosprin Paint Spray Booth (Small Building B Paint Booth)	April, 1976	Scrubber System
Unit 02	MJ7450: OMI Chrome Plating Tank MJ7450 (HX278 Chrome Plate System)	July, 1980	Fume Scrubber #1

Emission Unit	Description	Date Constructed	Emission Control Equipment
	MJ7451: OMI Chrome Plating Tank MJ7451 (HX278 Chrome Plate System)	July, 1980	Fume Scrubber #2
	MJ8968: OMI Chrome Plating Tank MJ8968 (HX470 Chrome Plate System)	February, 1990	Fume Scrubber F103-18
	MJ8970 OMI Chrome Plating Tank MJ8970 (HX470 Chrome Plate System)	February, 1990	Fume Scrubber F103-14
Unit 03	Electric Furnace Co. Model #4725-4-E Heat Treating Furnace with North American Gas Burner Tubes (MJ8859 Hardening Furnace, 3.165 mmBtu/hr)	April, 1989	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 03 (Cont.)	Electric Furnace Co. Model #4425-4-5 Heat Treating Furnace with North American Gas Burner Tubes (MJ8861 Temper Furnace, 1.175 mmBtu/hr)	April, 1989	None
	Electric Furnace Co. Model #4725-4-E Heat Treating Furnace with North American Gas Burner Tubes (MJ8886 Hardening Furnace, 3.784 mmBtu/hr)	April, 1989	None
	Electric Furnace Co. Model #4425-4-5 Heat Treating Furnace with North American Gas Burner Tubes (MJ8888 Temper Furnace, 2.505 mmBtu/hr)	April, 1989	None
	Electric Furnace Co. Model #4725-4-E Heat Treating Furnace with North American Gas Burner Tubes (MJ8889 Hardening Furnace, 3.784 mmBtu/hr)	April, 1989	None
	Electric Furnace Co. Model #4425-4-5 Heat Treating Furnace with North American Gas Burner Tubes (MJ8891 Temper Furnace, 2.505 mmBtu/hr)	April, 1989	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 04	B1: Springfield Boiler (Cleaver Brooks) Model Max W.P. 200 Natural Gas-Fired Boiler (Boiler #1, 110 mmBtu/hr)	November, 1972	None
	Springfield Boiler (Cleaver Brooks) Model Max W.P. 200 Natural Gas-Fired Boiler (Boiler #4, 137 mmBtu/hr)	November, 1972	None
Unit 05	AH1: Industrial Commercial Equipment BMA 148 Model S Make-Up Air Heater (Make-Up Air Heater #1, 4.5 mmBtu/hr)	May, 1993	None
	AH2: Industrial Commercial Equipment BMA 148 Model S Make-Up Air Heater (Make-Up Air Heater #2, 4.5 mmBtu/hr)	May, 1993	None
Unit 05 (Cont.)	AH3: Industrial Commercial Equipment BMA 148 Model S Make-Up Air Heater (Make-Up Air Heater #3, 4.5 mmBtu/hr)	May, 1993	None
	AH4: Industrial Commercial Equipment BMA 148 Model S Make-Up Air Heater (Make-Up Air Heater #4, 4.5 mmBtu/hr)	May, 1993	None
Unit 06	Gasoline Storage Tank TT0420 (10,000 gallons)	October, 1986	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 07	B2: Springfield Boiler (Coen Burners) Model Max W.P. 200 Natural Gas/No. 2 Distillate Fuel Oil-Fired Boiler (Boiler #2, 112.6 mmBtu/hr (gas), 112.0 mmBtu/hr (oil))	November, 1972	Low NO _x Burner
	B3: Springfield Boiler (Coen Burners) Model Max W.P. 200 Natural Gas/No. 2 Distillate Fuel Oil-Fired Boiler (Boiler #3, 175 mmBtu/hr (gas), 119.888 mmBtu/hr (oil))	November, 1972	Low NO _x Burner
Fugitive VOM Emissions	Cab Assembly Area and Chrome Plating System Solvent Usage	-	None

III. EMISSIONS

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

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

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Nitrogen Oxides (NO _x)	420.64
Particulate Matter (PM)	12.87
Sulfur Dioxide (SO ₂)	1.46
Volatile Organic Material (VOM)	103.38

HAP, not included in VOM or PM	--
TOTAL	538.35

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

IV. APPLICABLE EMISSION STANDARDS

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

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

All emission sources in Illinois must comply with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP). The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work

practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

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

Because this source is located in the Chicago ozone non-attainment area and emits volatile organic material (VOM), the permit includes conditions to implement the Emissions Reduction Market System (ERMS). The ERMS is a market-based program designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as further described in Section 6.0 of the permit. The permit contains the Illinois EPA's determination of the source's baseline emissions and allotment of trading units under the ERMS, and identifies units not subject to further reductions. The permit also provides that the source must begin to operate under the ERMS following the initial issuance of allotment trading units to the source. This will occur for the 2000 seasonal allotment period (rather than the 1999 season as originally intended by the ERMS) due in part to delays in the initial issuance of CAAPP Permits. These delays, which have occurred nationally, are attributable to a variety of causes including the unforeseen complexity of processing these permits and gaps in national guidance. Even though operation under the ERMS will not officially start until the 2000 seasonal allotment period, detailed recordkeeping and reporting of seasonal emissions was required beginning in 1998, which will document emissions reductions achieved by sources in 1999 in preparation for the ERMS.

VI. REQUEST FOR COMMENTS

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

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

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